The CANADIAN ROSE ANNUAL

1962

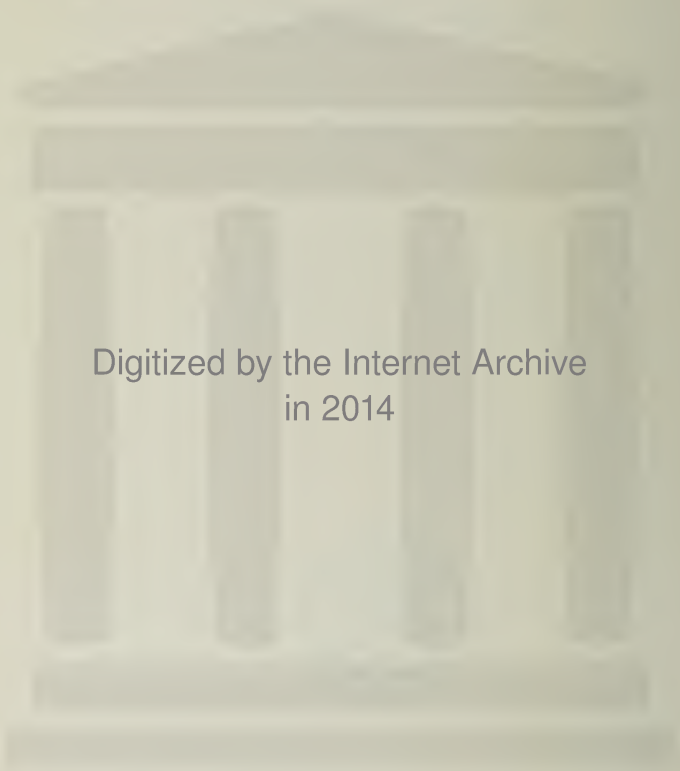
MRS ANNE GRABER
10 FAIRFAX CRES
SCARBOROUGH ONT
M1L 1Z8

The Canadian Rose Annual 1962

ORVILLE E. BOWLES
EDITOR

Published by

THE CANADIAN ROSE SOCIETY
Toronto, Ontario


Digitized by the Internet Archive
in 2014

https://archive.org/details/canadianrose1962cana

Engravings by Bomac

The Madame Vanier Rose

The Madame Vanier Rose was originated in France by J. Orard Feyzin, and named in her honor in recognition of Mrs. Vanier's welfare work among the French people during the eight years that Governor-General Vanier was Canadian Ambassador to France. It was sent from France to Government House in November 1960. The bloom is apricot pink in color and the roses are now growing in Her Excellency's rose garden.

Preface

IT is a pleasure to again present *The Canadian Rose Annual* and with it the experience, knowledge and judgment, of many rosarians and writers; and on behalf of our members to extend our thanks and grateful appreciation to all those who gave so generously of their time in its preparation.

We have been greatly honoured this year by Her Excellency Madame Vanier in selecting our *Annual* to record the announcement of the beautiful new 'Madame Vanier' rose, which we hope will thrive in Canada.

The 'Clearing House' has again been prepared by Mr. W. J. Keenan and 'The Rose Analysis' by Mr. Archie Selwood. We are fortunate in having these important features prepared by such experienced rosarians.

Again our advertisers have been loyal and generous in their support, making the presentation of this book possible. In appreciation, we solicit for them the continued patronage of our members and friends.

We hope all those who promote the culture of the rose, and who read these pages, will find them interesting and instructive and that they will lead to a better understanding of the purpose of our Society — the extension and improvement of the culture of the rose.

ORVILLE E. BOWLES

Index

Preface, *by Orville E. Bowles* 5

The Rose, *Author Unknown* 8

Patrons, Patronesses, Officers, Directors, Committees . . . 11

The Madame Vanier Rose 3

The President's Message 17

The Annual Meeting 19

Trophies and Prizes awarded at the 1961 Rose Show . . . 23

Weariness, *by Edgar A. Guest* 29

The National Rose Show—1961, *by Audrey K. M. Meiklejohn* 30

National Rose Society of Great Britain 32

Acti-Dione In Rose Disease Control, *by William C. Haskett* . 33

Rose Growing For Beginners, *by G. C. Warren* 39

Control of Blackspot and Powdery Mildew, *by W. D. Pamenter* 43

Pruning Your Roses, *by J. H. Eddie* 46

Breeding For Hardy Everblooming Garden Roses, *by Griffith J. Buck* 50

Exhibiting Roses, *by Margaret E. Dove* 54

The New Roses In Great Britain In 1961, *by Sam McGredy* . 60

Leaf Mould? *by R. Warren Oliver* 62

Leaf Analysis — A New Diagnostic Tool, *by J. A. Archibald* . 67

Should Gardeners Have Their Soil Tested? *by T. J. Heeg* . 71

The Weather and Plant Disease, *by W. G. Kemp* 75

Newer Hybrid Tea Roses In Great Britain, *by Leonard Hollis* 81

Rose Growing In Britain As Seen By A Canadian Visitor, *by Harold C. Cross* 90

Roses To Survive, *by A. Dick, B.Sc., M.D.* 96

Winter Protection, *by Fred H. Rogalski* 101
The History and Lineage of Modern Roses, *by J. H. Wilding* . 103
The Revolution In Climbers, *by Emerson Mitchell* . . . 111
Arranging Treasures From Our Gardens, *by Elaine Cochrane* . 115
Our Chemical Fertilizers, *by Orville E. Bowles* 122
District Reports:
Westholme, *by F. N. Parker* 137
Vancouver, *by Mollie McLeod* 138
North-Central, Saskatchewan, *by Gary Essar* 143
Manitoba, *by Mrs. W. M. MacDonald* 144
Lakehead Area, *by H. C. Westbrook* 148
Kirkland Lake, *by Mrs. F. Daugherty* 150
Barrie, *by Russ McLaren* 151
Windsor, *by Emerson Mitchell* 152
Ingersoll, *by Fred J. George* 154
St. Catharines, *by Alfred A. Miles* 157
Peterborough, *by Margaret A. Heideman* 158
Ottawa, *by W. M. Cavaye* 160
Montreal District, *by E. B. Jubien, W. G. Borland and H. C. Cross* 162
St. Paul L'Ermite, *by Mrs. R. M. Ferguson* 163
Quebec City, *by Louis T. Beaulieu* 165
Dalhousie, *by L. A. Miller* 167
Central Nova Scotia, *by Alfred W. Nowlan* 167
Annapolis Royal, *by Mrs. Marie Cox* 170
Prince Edward Island, *by Dr. R. G. Lea* 171
The Rose Analysis 173
The Clearing House 187
Index to Advertisers 222

The Rose

IN spite of centuries of disturbances, upheavals and turmoils, the rose has persisted and improved to become an ever-living symbol, that come what may, Beauty shall not perish from the earth, and that of all the works of men, none is greater.

That in the trials and tribulations through which he has passed, he has still found time! Nay, made time, to produce the modern rose as a permanent memorial to all that is Good and Beautiful in Life. For while the rose lives — so will man's thoughts turn from horrors, fears, devices and stratagems to return to the beauty which abides in the mind and urges him to produce that which is better and more beautiful.

Author unknown

'SUPER STAR' (H.T.)
Raised by Mathias Tantau, Germany
TRIAL GROUND CERTIFICATE, GOLD MEDAL, AND PRESIDENT'S INTERNATIONAL TROPHY, 1960
Reproduced by kind permission of the National Rose Society of Great Britain

The Canadian Rose Society

Chief Patron:

HIS EXCELLENCY MAJOR-GENERAL GEORGE P. VANIER,
D.S.O., M.C., C.D.,
Governor General of Canada

Patrons:

Mrs. G. Graeme Adam
Mr. Ralph P. Bell, O.B.E., and Mrs. Bell
Dr. A. P. Chan
Mrs. George H. Duff
Mr. F. F. Dufton
Lady Eaton
Mr. Rupert Edwards
Mr. Dunnington Grubb
Dr. R. J. Hilton, B.SC. (AGR.), PH.D.
Colonel R. S. McLaughlin
The Honourable H. de M. Molson, O.B.E.
Mr. Harold Rea and Mrs. Rea
Mrs. Campbell Reaves
Mr. Archie Selwood
Dr. F. L. Skinner, M.B.E., L.L.D.
Miss F. Fyfe Smith
Mr. Schuyler C. Snively and Mrs. Snively
The Honourable Mr. Justice C. D. Stewart
Miss Mabel Stoakley
Mrs. P. A. Thomson

HONORARY OFFICERS

Immediate Past President

Mrs. J. H. Baillie

Honorary Vice-Presidents

Mrs. A. C. McMaster
Mr. E. W. Tyrill, Q.C.
Mr. A. A. Norton
Dr. A. H. Rolph
Mrs. J. Lockie Wilson

Honorary Directors

Mr. A. E. Brown
Mr. J. F. Clark
Mrs. J. J. Gallagher
Mr. L. Laking
Mr. Emerson Mitchell
Mrs. A. L. Naismith
Dr. R. W. Oliver
Mr. D. C. Patton
Professor J. C. Taylor
Mrs. C. T. Wilson

OFFICERS

President

Mr. E. Billington

Vice-Presidents

Mr. O. E. Bowles
Mr. M. A. Cadsby
Mr. L. Earle Wicklum
Mr. J. W. Whytock

Board of Directors

Mr. A. M. Anderson
Mrs. J. H. Baillie
Mr. E. Billington
Mr. O. E. Bowles
Mrs. R. M. Brophy
Mr. M. A. Cadsby
Mr. F. N. Comper
Mr. C. F. Davis
Mrs. H. C. Dollery
Mr. W. M. Earl
Mr. G. S. Flagler
Mrs. G. A. Griffin
Mr. F. S. Goulding
Mrs. S. Jupp
Mr. W. J. Keenan
Mrs. H. P. Marshall
Mr. S. McConnell
Mrs. A. B. Meiklejohn
Mr. M. B. Morlock
Mr. C. R. Stephenson
Mr. J. W. Whytock
Mr. L. E. Wicklum

Treasurer: Mr. F. E. Goulding, 38 Berkinshaw Cres., Don Mills, Ontario
Secretary: Mrs. H. Millar, 18 Bimbrok Road, Scarborough, Ontario
Recording Secretary: Mrs. A. B. Meiklejohn, 135 Bombay Ave., Downsview, Ontario

Cultural Advisory Board

Mr. W. J. Keenan (*Chairman*)

Mr. J. H. Eddie, 4100 S.W. Marine Dr., Vancouver 13, British Columbia
Mr. J. Petty, Box 14, R.R. 7, Langley, British Columbia
Mr. Archie Selwood, 1450 West 40th Avenue, Vancouver 13, British Columbia
Mrs. W. M. MacDonald, 174 Baltimore Road, Winnipeg 13, Manitoba
Mr. Emerson Mitchell, 1557 Bruce Avenue, Windsor, Ontario
Mr. D. McConnell, Port Burwell, Ontario
Mr. A. E. Brown, P.O. Box 181, Islington, Ontario
Mr. A. A. Norton, 22 Eastview Crescent, Toronto 12, Ontario
Mr. W. J. Keenan, 107 Cortleigh Boulevard, Toronto 12, Ontario
Mr. John E. Chester, Bowmanville, Ontario
Mr. W. H. Perron, 515 Labelle Blvd., L'abord a Plouffe, Montreal 40, Quebec
Mr. E. B. Jubien, 150 Vivian Avenue, Town of Mount Royal, Montreal 16, Quebec
Mrs. Marie Cox, Annaplis Royal, Nova Scotia
Mr. R. Snazelle, R.R. 5, Charlottetown, Prince Edward Island

Auditors

Mr. S. B. Bartlett, C.A.
Mr. M. C. Coutts, R.I.A.

Exhibition Committee

Mr. C. F. Davis (*Chairman*)

Finance Committee

Mr. W. J. Keenan (*Chairman*)

Mr. F. E. Goulding
Mr. L. Earl Wicklum
Mr. J. W. Whytock

Membership Committee

Mrs. G. H. Griffin (*Chairman*)
108 Lascelles Boulevard, Toronto 7, Ontario

Vice-Chairmen

Mr. O. E. Bowles Mrs. H. Millar Mr. C. R. Stephenson

Members

Mrs. O. H. Antoft, R.R. 1, Kentville, Nova Scotia
Mr. M. Bowes, 24 Mountain Street, Merriton Ward, St. Catharines, Ontario
Mr. F. Blakeney, 7255 Salisbury Avenue, South Burnaby, British Columbia
Mr. W. G. Borland, 418 New Birks Building, Montreal 2, Quebec
Mr. W. C. Buchanan, 189 Park Street, Sydney, Nova Scotia
Mr. F. N. Comper, 14 Donegal Drive, Toronto 17, Ontario
Mr. W. M. Earl, 138 Joicey Boulevard, Toronto 12, Ontario
Mr. G. Fenske, 226 Dixon Road, Weston, Ontario
Mrs. J. J. Gallagher, 4040 Marlowe Ave., Montreal, Quebec
Mr. T. Graham, Box 32, Lynden, Ontario
Mrs. J. H. Gable, 23 Wellington St. W., Barrie, Ontario
Dr. T. E. Harris, 172 Patrick Street, St. John's, Newfoundland
Mr. E. B. Jubien, 150 Vivian Avenue, Mount Royal, Quebec
Mrs. M. Kertesz, 32 Wolfrey Avenue, Toronto 6, Ontario
Mrs. W. M. MacDonald, 174 Baltimore Road, Winnipeg 13, Manitoba
Mr. M. B. Morlock, 50 Spencely Court, Weston, Ontario
Mrs. R. E. Murdock, 2785 Crescent View Drive, North Vancouver, British Columbia
Mr. H. C. Westbrook, 48 Prospect Ave., Port Arthur, Ontario

Nominating Committee

Mrs. J. H. Baillie (*Chairman*)

Mr. O. E. Bowles Mr. L. E. Wicklum
Mr. M. A. Cadsby Mr. J. W. Whytock

Programme Committee

Mrs. H. C. Dollery (*Chairman*)

Mrs. R. M. Brophy Mrs. J. H. Baillie Mrs. H. P. Marshall

Properties Committee

Mr. G. S. Flagler (*Chairman*)

Mr. F. H. Burbridge Mr. F. N. Comper

Publications and Advertising Committee

Mr. O. E. Bowles, 22 Cameron Crescent, Leaside, Toronto 17, Ontario

(*Chairman and Editor* of 'The Canadian Rose Annual')
Mr. M. A. Cadsby, 28 Hilltop Road, Toronto 10, Ontario

(*Vice-Chairman and Editor* of 'The Rose Bulletin')

Mr. W. J. Keenan Mr. A. A. Norton Mr. Archie Selwood

Publicity and Public Relations Committee

Mrs. H. P. Marshall (*Chairman*)

Mrs. R. M. Brophy — Miss M. E. Dove — Mrs. E. B. Kernaghan

Representatives to the Royal Winter Fair

Mr. W. J. Keenan — Mrs. H. P. Marshall — Mr. C. R. Stephenson

Regional Directors Committee

Mr. W. J. Keenan (*Chairman*)
107 Cortleigh Boulevard, Toronto 12, Ontario

Mr. M. B. Morlock (*Vice-Chairman*)

REGIONAL DIRECTORS

Region 1

Mr. E. N. Grant, 1282 Connaught Drive, Vancouver 9, British Columbia
Mr. F. N. Parker, Westholme, Vancouver Island, British Columbia
Mr. Archie Selwood, 1450 West 40th Ave., Vancouver 13, British Columbia

Region 2

Mr. J. P. Talbot, 811 18th St. S., Lethbridge, Alberta
Mr. E. Walker, 10808 140th Street, Edmonton, Alberta

Region 3

Mrs. W. M. MacDonald, 174 Baltimore Road, Winnipeg, Manitoba
Mr. H. C. Westbrook, 48 Prospect Avenue, Port Arthur, Ontario

Region 4

Mrs. A. L. Naismith, 116 Arnold Street, Hamilton, Ontario
Mr. Fred J. George, Box 53, Ingersoll, Ontario
Dr. J. H. C. Gowland, 221 King Street East, Kingston, Ontario
Mrs. Alan H. Heidman, 373 Park Street N., Peterborough, Ontario
Mr. Alfred A. Miles, 29 Lincoln Avenue, St. Catharines, Ontario
Mr. Emerson Mitchell, 1557 Bruce Avenue, Windsor, Ontario

Region 5

Mr. Louis T. Beaulieu, 718 St. Cyrille West, Quebec City 6, Quebec
Mr. W. George Borland, 418 New Birks Buildings, Montreal, Quebec
Mr. Harold C. Cross, 702 Churchill Place, Bai d'Urfee, Quebec
Mr. E. B. Jubien, 150 Vivian Avenue, Town of Mount Royal, Montreal, Quebec

Region 6

Mr. L. A. Miller, P.O. Box 408, Dalhousie, New Brunswick
Dr. A. B. Crosby, 324 Spring Garden Road, Halifax, Nova Scotia

Region 7

Dr. R. G. Lea, 170-172 Fitzroy Street, Charlottetown, Prince Edward Island
Dr. T. E. Harris, 284A Water Street, St. John's, Newfoundland

AFFILIATED SOCIETIES

Baie d'Urfee Horticultural Society
Bedford Garden Club
Calgary and District Horticultural Society
Calgary Rose Society
Champlain Garden Club
Chapleau Horticultural Society
Don Mills Horticultural Society
Dunnville Horticultural Society
Etobicoke Horticultural Society
Guelph Horticultural Society
Halifax County Horticultural Association
Hamilton Rose Society
Horticultural Society of the Town of Mount Royal
Horticultural Society of the Township of Teck
Ingersoll and District Horticultural Society
Lachine Horticultural Society
Leaside Horticultural Society
Lethbridge and District Horticultural Society
London Horticultural Society
Mimico Horticultural Society
Montreal West Horticultural Society
Mount Hamilton Horticultural Society
Nelson Garden Club
New Westminster Horticultural Society
Niagara Falls Horticultural Society
Northern Electric Club
North York Township Horticultural Society
Owen Sound Horticultural Society
Peterborough Horticultural Society
Port Arthur Horticultural Society
Rice Lake Horticultural Society
Sault Ste Marie Horticultural Society
Sioux Lookout Horticultural Society
St. Catharines and District Rose Society
St. Lambert Horticultural Society
Vancouver Rose Society
West End Horticultural Society
Winnipeg Horticultural Society
Woodbridge Horticultural Society

Mr. Eric Billington
President

The President's Message

IT is with a feeling of gratitude and humility that I have accepted this appointment; with gratitude to the Board of Directors for the faith they have placed in me, and with humility in the realization of the responsibilities that devolve on me as President.

The Canadian Rose Society has a long and distinguished heritage. Originally organized in the year 1913 as The Rose Society of Ontario it became a National body in 1954 and is approaching a half century of service devoted to the extension of knowledge, and encouragement, in the cultivation of the rose. We can take pride in reviewing the growth and progress of the Society during these years and we are deeply indebted to the officers and members who through the years have contributed so generously of their time and energy on its behalf.

In looking forward to future progress we must endeavour to build a Canadian rose society that will be an even finer organization; one with new ideas and a sincere desire to promote good fellowship — a society which will be so attractive and desirable that all who grow roses, or contemplate doing so, will wish to become a member. It is within the power of each of us to promote these objectives if we are willing to devote a little of our time on behalf of the Society.

Do you as a member inquire if there is something you can do to assist the Society or are you satisfied to pay your membership dues and accept the benefits without any thought of assisting those who provided them? There are many ways in which you can assist both yourself and the Society and I would like to suggest a few: —

You can take an active part in the administration of our Society.

You can encourage those of your friends who are interested in roses to become members.

You may be able to give talks to local societies on the merits of rose growing and even gather together a group to form a local rose society of your own — our Society will give all the assistance it can in the formation of these groups.

You can contact your Regional Director and pass on to him the experience you have gained in your particular area in rose culture. This information in turn reaches the central body where it is pooled and goes out to assist other members.

You are invited to contact your nearest member of the Cultural Advisory Board, whose name and address appears in this *Annual,* if you require advice or assistance in general cultural procedures, or in any problem that may arise.

The Society can be justly proud of the creative work embodied in this *Canadian Rose Annual* and great credit is due our Editor and all those who contributed to its production.

As is frequently the case with organizations that do not operate on a profit basis our Society is concerned with the increasing costs of services provided to our members. It will always be our objective to maintain the highest possible degree of service in keeping with our revenue and in this respect I am happy to advise that a very efficient finance committee has been appointed who will guide the Society in meeting this problem.

With our heritage as a foundation and every member lending support and assistance we will go forward into the new season with confidence and to all members and friends may I extend the hearty wish that 1962 will be your most successful and most enjoyable year with the 'Queen of Flowers'.

The Annual Meeting

Mrs. H. Millar

(Secretary)

THE 1961 Annual Meeting of The Canadian Rose Society was held on October 4th at the new Tea Room of Salada-Sheriff-Horsey Limited, Canadian National Exhibition Park, Toronto, and was called to order at 8.30 p.m. by the President, Mrs. J. H. Baillie, who occupied the chair, and the Secretary, Mrs. H. Millar, acted as secretary of the meeting.

In opening the meeting the President extended a welcome to those present, especially those who had travelled some distance. Assurance was then requested from the Secretary that the meeting was properly assembled in accordance with the Society's constitution and by-laws and after reading those sections pertaining to the Annual Meeting the President was assured by the Secretary that the meeting was properly constituted.

Upon a motion made by Miss M. E. Dove, seconded by Mr. F. J. George, the minutes of the Annual Meeting held on October 4th, 1960 were taken as read.

Mr. W. J. Keenan, Chairman of the Nominating Committee, and in accordance with section 8 of the by-laws, advised the meeting that since no nominations had been made other than those put forward by the Nominating Committee he would move the following members of the Society be elected to the Board of Directors for a period of three (3) years.

Mrs. R. M. Brophy	Mr. W. M. Earl	Mrs. H. P. Marshall
Mr. F. N. Comper	Mrs. G. A. Griffin	Mr. M. B. Morlock
	Mr. W. J. Keenan	

and the following Directors be re-elected for a period of one (1) year.

Mr. A. M. Anderson	Mr. C. F. Davis	Mr. S. McConnell
Mrs. J. H. Baillie	Mrs. H. C. Dollery	Mrs. A. B. Meiklejohn
Mr. E. Billington	Mr. G. S. Flagler	Mr. C. R. Stephenson
Mr. O. E. Bowles	Mr. F. E. Goulding	Mr. J. W. Whytock
Mr. M. A. Cadsby	Mrs. S. Jupp	Mr. L. Earle Wicklum

Seconded by Mr. O. E. Bowles

At the request of the President the proposed changes in the by-laws of the Society, of which each member had received a copy in accordance with Section 22 thereof, were read by Mr. W. J. Keenan. Seconded by Mr. G. S. Flagler and carried unanimously.

The Treasurer, Mr. F. E. Goulding, then presented his interim report and pointed out that in the future the fiscal year of the Society would end on December 31st and it would accordingly be impossible to present a full current financial statement at the Annual Meetings. Mr. Goulding expressed the appreciation of the Society for the work done by our auditors, Messrs. M. C. Coutts, R.I.A., and S. B. Bartlett, C.A., and moved that they be re-appointed for 1962. Seconded by Mrs. R. M. Brophy.

The President then addressed the meeting as follows:

'On the occasion of this seventh Annual Meeting of The Canadian Rose Society it is my privilege and pleasure to extend to you all a very sincere welcome. Especially are we pleased to see our members from out of town; from Ingersoll, Woodbridge, Uxbridge, and other points. We extend a special welcome to two members who joined the Rose Society of Ontario over 20 years ago.

In referring briefly to some of the highlights of the year's activities of your Society we must recall the severe toll taken of our rose bushes again last winter, and while it did somewhat dampen our ardour I believe the majority of the members had a successful season. We had adequate moisture and good growing conditions throughout the summer with the result our bushes flourished and interest in rose growing was maintained at a high level, and with it interest in your society.

Our membership has reached a new high point and now includes six affiliated rose societies and thirty three horticultural societies. Our congratulations to Mr. W. J. Whytock and his committee.

The peak of our activities during the past season, as in other years, was the National show held in June. This year it was held again at the spacious Leaside Memorial Community Gardens and for the first time the show was extended to two days, Saturday and Sunday June 24-25th. In this strenuous and exacting task, which this year included more exhibitors and exhibits from different parts of the country, we thank Mr. W. J. Keenan and his committee for a job well done.

Our Old Rose garden at Glendon Hall fell victim of progress through the expansion of York University. The rose bushes were moved last spring to The Royal Botanical Gardens at Hamilton to become part of their lovely gardens. Our thanks are due Professor L. Laking and his staff for moving and relocating them, and to Mr. A. M. Anderson for making the arrangements.

The work of the Society goes on and roses are being grown by more and more people. I am constantly being told that our publications are a great help to beginners and experienced rosarians alike. Much time and labour is involved in the production of *The Canadian Rose Annual* and *The Rose Bulletin,* which represent the principal benefit accruing to our out of town members. They are essential for the well being of our Society and of inestimable value to the membership committee. They constitute a permanent record of our activities.

Mr. O. E. Bowles and Mr. M. A. Cadsby, the respective editors, have done a most impressive job and we are most grateful to them.

The increasing cost of printing and mailing is presenting a very serious problem for your Board of Directors.

The President can only function with the co-operation of The Board of Directors and Committee Members and I wish to thank each and every one for their help. They have given unstintingly of their time, energy and experience to the interest and well being of The Canadian Rose Society and they are entitled to the support and gratitude of every rose lover. I wish you all good rose growing.'

The speakers and Mrs. A. G. Brooks were then introduced to the Meeting by Mrs. Baillie.

Mr. O. E. Bowles spoke first and his timely topic was 'Winter Protection' in which he emphasized that after years of research, insecticides and fungicides are now available that with proper use will largely overcome the battle against insects and disease. We are however still left with our greatest problem, at least in the colder areas, namely winter-kill. He explained in detail the procedures he has used with success in overcoming this hazard.

Mrs. Nina Marshall gave a very interesting outline of her visit to the spring show and meeting of The American Rose Society held at Passadena, California. Her description of the show and some of the newer roses being shown was very interesting and informative and greatly enjoyed.

Mrs. A. G. Brooks held the interest and attention of those present with a lovely mass and line arrangement of roses.

The report of the judges of the Autumn Show, Mrs. H. P. Marshall, Mrs. J. A. Lowe and Mr. A. A. Norton was then received and it was learned that the S. B. Bartlett Challenge Trophy, for highest aggregate score, had been won by Mrs. A. B. Meiklejohn for the third successive year. It should be recorded that Mrs. Meiklejohn was awarded first prize on all six of her entries.

The meeting then adjourned to inspect the show and enjoy the refreshments arranged by Mrs. R. M. Brophy and her committee and our hosts Salada-Shiriff-Horsey Limited. The show benches were filled with high quality blooms and very interesting arrangements and it was noted that Mrs. M. Oliphant, Mr. A. M. Anderson and Mr. F. E. Goulding were also winners of several prizes.

Trophies and Prizes Awarded at The 1961 Rose Show

Leaside Memorial Community Gardens, June 24-25, 1961

SECTION A — CANADIAN ROSE SOCIETY TROPHY CLASSES

Class

A W. J. Keenan Challenge Bowl — Four specimen hybrid tea blooms, one each of four different varieties: 1 F. H. Rogalski, 2 Mrs. A. L. Naismith, 3 O. E. Bowles

D P. L. Whytock Challenge Trophy — Exhibit of floribunda or polyantha roses, three varieties, two stems of each variety: 1 no award, 2 no award, 3 R. Scott

E Henry Bertram Memorial Trophy — Bowl of specimen blooms, either hybrid teas or perpetuals: 1 O. E. Bowles

SECTION C — TROPHY CLASSES

2. S. McGredy & Sons Challenge Cup — Exhibit of roses, six different varieties, blooms or sprays of any kind: 1 Mrs. S. Jupp, 2 Mrs. M. Cadsby, 3 G. Culver.

4. The Walter Moore Memorial Challenge Trophy — Three varieties, white or near-white hybrid teas. One specimen bloom of each: 1 Mrs. A. L. Naismith

5. Ellis Bros. Ltd. Challenge Trophy — Three varieties, yellow hybrid tea roses one specimen bloom of each: 1 no award, 2 Mrs. A. L. Naismith

6. Sir William Meredith Trophy — Three varieties pink hybrid tea roses, one specimen bloom of each: 1 Mrs. A. L. Naismith, 2 no award, 3 Mrs. M. Cadsby

7. Miss Vera McCann Challenge Trophy — Three varieties red hybrid tea roses, one specimen bloom of each: 1 Mrs. A. L. Naismith, 2 V. Wales, 3 G. Culver

8. The John H. Dunlop Memorial Challenge Trophy — Three varieties of blend or bicolour hybrid tea roses, one specimen bloom of each: 1 Mrs. A. L. Naismith, 2 O. E. Bowles
The Canadian Rose Society, silver medal — For highest aggregate score in classes 4 to 8 inclusive: Mrs. A. L. Naismith

SECTION D — HYBRID TEAS, SPECIMEN BLOOMS

9. 1 specimen bloom, 'White Knight' or 'Message': 1 Mrs. A. L. Naismith, 2 G. Culver, 3 G. A. Campbell

10. 1 specimen bloom white or near-white, any named variety except 'White Knight' or 'Message': 1 Mrs. A. L. Naismith, 2 F. H. Rogalski, 3 Mrs. A. Wallace

11. 1 specimen bloom, 'McGredy's Yellow': 1 Mrs. A. Stollery, 2 G. Culver, 3 A. M. Anderson

13. 1 specimen bloom, any named variety, medium to deep yellow: 1 Mrs. A. L. Naismith, 2 Mrs. A. Wallace, 3 no award

14. 1 specimen bloom of 'Peace': 1 Mrs. E. Else, 2 G. Culver, 3 no award

15. 1 specimen bloom of 'Peace' fully open but center not showing: 1 S. Sterling, 2 no award, 3 no award.

16. 1 specimen bloom of 'Sutter's Gold': 1 S. Else, 2 Miss T. Burnie, 3 Mrs. S. Jupp

17. 1 specimen bloom any named variety of yellow blend except 'Peace' or 'Sutter's Gold': 1 Mrs. A. L. Naismith, 2 G. Culver, 3 Mrs. A. Wallace

18. 1 specimen bloom, any named variety of apricot and orange blend: 1 Mrs. A. L. Naismith, 2 Mrs. M. L. Oliphant, 3 S. Else

19. 1 specimen bloom of 'Michele Meilland': 1 Mrs. A. L. Naismith, 2 no award, 3 no award

20. 1 specimen bloom of any named variety of pale pink except 'Michele Meilland': 1 F. H. Rogalski, 2 Mrs. A. Stollery, 3 Mrs. J. A. Lowe

21. 1 specimen bloom of 'Show Girl': 1 F. H. Rogalski, 2 W. J. Keenan

22. 1 specimen bloom of any named variety of medium pink except 'Show Girl': 1 Mrs. J. H. Baillie, 2 Mrs. A. Wallace, 3 Mrs. J. S. Carter

23. 1 specimen bloom of 'Kordes Perfecta': 1 F. H. Rogalski, 2 G. A. Campbell, 3 G. Culver

24. 1 specimen bloom of 'Tiffany': 1 Mrs. A. L. Naismith, 2 Miss E. M. Rowland, 3 Mrs. M. L. Oliphant

25. 1 specimen bloom of any named variety of pink blend except 'Kordes Perfecta' and 'Tiffany': 1 F. H. Rogolski, 2 Mrs. M. L. Oliphant, 3 Mrs. A. L. Naismith

26. 1 specimen bloom of 'Rubaiyat': 1 Mrs. A. L. Naismith, 2 no award, 3 F. H. Rogalski

27. 1 specimen bloom of any named variety of deep pink and light red except 'Rubaiyat': 1 Mrs. A. Wallace, 2 no award, 3 G. Culver

28. 1 specimen bloom of 'Crimson Glory': 1 Mrs. A. L. Naismith, 2 Mrs. A. Wallace, 3 A. M. Anderson

29. 1 specimen bloom of any named variety of red except 'Crimson Glory': 1 A. M. Anderson, 2 Mrs. A. Wallace, 3 F. E. Goulding

30. 1 specimen bloom of any named variety of red blends and bicolours: 1 F. E. Goulding, 2 Mrs. A. B. Meiklejohn, 3 Mrs. A. L. Naismith

31. 1 specimen bloom of any named variety of mauve or lavender: 1 no award, 2 P. McDougall, 3 W. J. Keenan

SECTION E — SINGLE HYBRID TEAS

32. Naturally grown specimen of single hybrid tea: 1 Mrs. A. Wallace, 2 W. J. Keenan, 3 F. H. Rogalski

SECTION F — BLOOM CYCLE OF HYBRID TEA ROSE

33. Three specimens of one variety showing one bud quarter open, one bloom half open and one bloom fully open (center may show): 1 G. A. Campbell, 2 F. H. Rogalski, 3 Mrs. A. L. Naismith

SECTION G — FLORIBUNDAS OR POLYANTHAS, NATURALLY GROWN SPRAY OR NATURALLY GROWN SINGLE SPECIMEN

35. 1 spray of single or semi double red floribunda: 1 R. C. Scott, 2 F. H. Rogalski, 3 J. S. Carter

36. 1 spray or single or semi double pink floribunda: 1 R. C. Scott, 2 F. H. Rogalski, 3 Mrs. A. L. Naismith

37. 1 spray of red double floribunda: 1 Mrs. A. L. Naismith, 2 Mrs. S. Jupp, 3 no award

38. 1 spray of pink double floribunda: 1 R. C. Scott, 2 Dr. R. W. Hoffman, 3 Mrs. G. R. Blaikie

39. 1 spray of white floribunda: 1 Mrs. S. Jupp, 2 F. H. Rogalski, 3 Mrs. A. L. Naismith

40. 1 spray of mauve or lavender floribunda: 1 no award, 2 Mrs. M. L. Oliphant, 3 no award

41. 1 spray of yellow floribunda: 1 Dr. R. W. Hoffman, 2 G. Baker, 3 W. J. Keenan

42. 1 spray of multi colour floribunda: 1 W. J. Keenan, 2 Mrs. M. L. Oliphant, 3 G. Baker

43. 1 spray of polyantha roses, any variety: 1 no award, 2 F. H. Rogalski, 3 no award

National Rose Society of Great Britain medal for highest aggregate score in classes 35 to 43 inclusive: R. C. Scott

SECTION H — GRANDIFLORAS

44. 1 naturally grown spray or naturally grown single specimen of 'Queen Elizabeth': 1 F. H. Rogalski, 2 B. S. Hemingway

45. 1 naturally grown stem with one bloom of any named variety except 'Queen Elizabeth': 1 Mrs. A. L. Naismith, 2 Miss E. M. Rowland, 3 Mrs. J. H. Collins

46. 1 naturally grown stem with more than one bloom of any named variety except 'Queen Elizabeth': 1 F. H. Rogalski, 2 no award, 3 no award

The Canadian Rose Society silver medal for highest aggregate score in classe 44, 45 and 46: F. H. Rogalski

SECTION I — HYBRID PERPETUALS

47. Ella Baines Memorial Challenge Trophy — Three hybrid perpetuals, one or more varieties: 1 Mrs. A. L. Naismith, 2 G. Baker, 3 G. Culver

48. T. Eaton Co. Ltd. Challenge Trophy — one specimen bloom of hybrid perpetual: 1 G. Culver, 2 G. Baker, 3 no award

SECTION J — CLIMBING ROSES

49. The Canadian Bank of Commerce Challenge Cup — Collection of climbing roses. Three sprays or stems of each variety (Climbing H.T.'s — H.P.'s and T's excluded) 1 F. H. Rogalski, 2 G. Baker

50. Two laterals of white or near-white climbing roses: 1 no award, 2 A. M. Anderson

51. Two laterals of pink climbing roses: 1 F. H. Rogalski, 2 Miss T. Burnie, 3 J. S. Carter

52. Two laterals of red climbing roses: 1 F. H. Rogalski, 2 F. E. Goulding, 3 C. R. Stephenson

53. Two laterals of yellow or yellow blend climbing roses (Climbing H.T.'s, named for the bush type of the same variety excluded): 1 Mrs. S. Jupp, 2 F. H. Rogalski, 3 Miss E. M. Rowland
The Canadian Rose Society silver medal awarded for highest aggregate score in classes 50 to 53 inclusive: F. H. Rogalski

SECTION K — MINIATURE ROSES, BUSH OR CLIMBING

54. 1 spray or bloom: 1 A. M. Anderson, 2 F. H. Rogalski, 3 Mrs. J. D. Scythes

55. Collection of four different varieties: 1 F. H. Rogalski

SECTION L — BOUTONNIERE

56. Gentleman's boutonniere: 1 G. Culver, 2 Miss T. Burnie, 3 Mrs. S. Jupp

SECTION M — MISCELLANEOUS

57. One naturally grown specimen or spray, with or without side buds: 1 F. H. Rogalski, 2 Mrs. T. J. F. Ross, 3 W. J. Keenan

58. Will Tillotson Memorial Award — Old rose bouquet: 1 Mrs. J. A. Lowe, 2 F. H. Rogalski, 3 Mrs. T. J. F. Ross

SECTION N — FRAGRANT ROSES

59. Mrs. Campbell Reaves Rose Bowl (prize) — six roses, not fewer than three varieties: 1 Mrs. A. L. Naismith, 2 G. Baker, 3 Mrs. A. Wallace

60. A. Alan Gow Memorial Trophy — three roses, any variety or varieties: 1 G. Culver, 2 Mrs. A. Wallace, 3 Mrs. J. H. Baillie

61. C. Alan Snowdon Memorial Challenge Trophy — One rose, any variety: 1 E. N. Grant, 2 Miss T. Burnie, 3 Miss E. M. Rowland

SECTION O — NOVICE CLASSES

62. A. A. Norton Award — six hybrid tea roses, any variety or varieties; 1 Mrs. M. Kertesz, 2 Mrs. G. H. Griffin, 3 R. C. Scott

63. Three hybrid tea roses, any variety or varieties: 1 Mrs. M. Kertesz, 2 Mrs. G. H. Griffin, 3 Mrs. P. McDougall

64. The Canadian Rose Society bronze medal — one specimen bloom of hybrid tea: 1 F. N. Comper, 2 G. Walker, 3 Mrs. T. J. F. Ross

65. One lateral of climbing roses (Climbing H.T.'s, H.P.'s, or T's excluded): 1 C. S. Hemingway, 2 Mrs. T. J. F. Ross, 3 Mrs. J. D. Scythes

66. One stem or spray of floribunda or polyantha roses: 1 Mrs. A. A. Bailie, 2 C. S. Hemingway, 3 Mrs. G. H. Griffin

SECTION P — AIRBORNE EXHIBITS

67. Six hybrid tea roses, named, any variety or varieties: 1 E. N. Grant, 2 A. Selwood

68. Three hybrid tea roses, named, any variety or varieties: 1 Mrs. R. A. Kerr, 2 E. N. Grant, 3 A. Selwood

69. One hybrid tea rose, named, any variety or varieties: 1 A. Selwood, 2 E. N. Grant, 3 Mrs. R. A. Kerr
A. J. Webster Challenge Trophy, awarded for maximum points in classes 67-68-69: E. N. Grant

SECTION Q — NON MEMBERS

71. One hybrid tea rose, named, any variety: 1 Mrs. R. L. Kennedy, 2 Miss M. Campbell, 3 R. W. Ness

SECTION R — SPECIAL TROPHIES

Best Rose in the Show, 'McGredy's Yellow', P. H. Mitchell Challenge Trophy: Mrs. Alan Stollery

Best White or Cream Rose in the Show, 'McGredy's Ivory', Canadian Oil Companies Ltd. Silver Tray (prize): Mrs. A. L. Naismith

Best Red Rose in the Show, 'Ena Harkness', Red Rose Tea Trophy: Mr. F. N. Comper

Highest Aggregate Score, Horticulture — Sir Harry Oakes Challenge Trophy: Mrs. A. L. Naismith

Novice Sweepstakes Award — Col. W. G. MacKendrick D.S.O. Challenge Trophy: Mrs. M. Kertesz

SECTION S — TROPHY CLASSES IN DECORATIVE SECTION

72. Mrs. P. A. Thomson Challenge Trophy — Open to women members, decorative arrangement: 1 no award, 2 no award, 3 Mrs. M. L. Oliphant

73. Lady Kemp Memorial Challenge Trophy — Roses in a suitable container expressing your idea of beauty: 1 Mrs. T. J. F. Ross, 2 Mrs. D. Hughes, 3 Mrs. M. Cadsby

75. The Hon. George S. Henry Challenge Trophy — Horizontal arrangement of roses suitable for a mantelpiece: 1 Mrs. M. Cadsby, 2 no award, 3 G. Culver

76. Mr. J. Lockie Wilson Memorial Challenge Trophy — An arrangement of red climbing or rambler roses: 1 no award, 2 no award, 3 Mrs. J. H. Collins

77. Mr. Seeley B. Brush Memorial Challenge Trophy — An arrangement of roses, with or without other flowers, suitable for living room, any foliage permitted: 1 Mrs. D. Hughes, 2 no award, 3 Miss J. Allen

78. Mrs. Walter H. Lyon, Roseholme Challenge Trophy — Luncheon table decoration roses only, any natural foliage permitted: 1 Mrs. T. J. F. Ross

80. Brig. A. E. Nash, M.C. Challenge Trophy — Small basket of roses only: 1 Miss T. Burnie

81. Lieut.-Col. Hugh A. Rose Challenge Trophy — Basket of red roses, any size: 1 Mrs. M. Cadsby, 2 Mrs. M. L. Oliphant

82. Mrs. J. Lockie Wilson Challenge Trophy — Bowl or vase of single hybrid tea roses, any colour: 1 Mrs. M. Cadsby

SECTION T — DECORATIVE CLASSES, ROSES INDOORS AND OUT

83. Arrangement 'My First Love': 1 F. H. Rogalski, 2 G. Culver

84. Arrangement 'A Penny Saved is a Penny Earned': 1 Mrs. J. A. Lowe, 2 Mrs. A. B. Meiklejohn, 3 Mrs. D. Hughes

85. Arrangement 'Reflections': 1 Mrs. J. A. Lowe, 2 Mrs. A. G. Brooks, 3 Mrs. D. Hughes

86. Arrangement 'New Moon' — Prize presented by Mrs. M. C. Hooper: 1 Mrs. J. H. Baillie, 2 Mrs. D. Hughes, 3 Mrs. M. Cadsby

87. Arrangement 'We Go Modern' — Prize presented by Mrs. J. H. Marshall: 1 Mrs. T. J. F. Ross, 2 Mrs. J. A. Lowe

88. Arrangement 'The Orient': 1 Mrs. J. A. Lowe, 2 Mrs. D. Hughes

89. Arrangement 'Over the Teacups': 1 Mrs. G. Abrams, 2 Mrs. A. B. Meiklejohn, 3 Mrs. J. A. Lowe

90. Arrangement 'Joyous June': 1 Mrs. J. A. Lowe, 2 Mrs. T. J. F. Ross

SECTION U — OPEN CLASS

92. Arrangement 'The Queen of Flowers': 1 Mrs. L. E. Wicklum

SECTION V

Rose Bowl prize presented by Mrs. Schuyler Snively as sweepstakes award for highest aggregate score in decorative classes: Mrs. J. A. Lowe

Weariness

God set him in a garden fair
Where roses bloomed each spring;
About him always everywhere
Was many a lovely thing,
With miracle and mystery
His every day was filled,
And yet he only seemed to see
The structures mortals build.

He knew the stars were overhead,
But seldom raised his eyes,
The paths of life he chose to tread,
A stranger to the skies.
From youth to manhood, then to age,
He plunged his spirit deep
In figures on the ledger page,
Correct accountants keep.

He never learned the names of flowers,
Or birds or friendly trees,
In all his busy wakeful hours
He never heard the breeze
Enticing him with bits of song
To let a day go by
To watch a brooklet race along
Or gaze upon the sky.

God set him in a garden fair
With countless splendors strewn,
But all he saw while walking there
Was stone some man had hewn,
And all he talked was loss and gain
And cold commercial strife —
Which makes it easy to explain
How tired he grew of life.

EDGAR A. GUEST

The National Rose Show — 1961

Audrey K. M. Meiklejohn

AFTER a long period of cool weather the sun broke through a few days before the week end of June 24-25th and the morning of opening day of The National Rose Show was as balmy and comfortable as a perfect June morning.

Inside the spacious auditorium of the Leaside Memorial Community Gardens, where the show was held again this year, all was activity with the usual show preparations. In addition it had the atmosphere of a movie set as Mr. Earl Cox had the Canadian Broadcasting technicians busy shooting the location of the show, the preparations, judging and many features that he thought would be of interest to his viewing audience on 'Country Calendar' broadcast the following day.

Due to the very cold spring experienced in the Toronto area the gardens had not reached their peak but many fine blooms came in that morning from more advanced areas. In addition the show was supported by many thousands of lovely roses donated by H. J. Mills, Richmond Hill; The Dale Estate Limited, Brampton; Bedford Park Nurseries, Thornhill; Concord Nurseries, Concord; Sheridan Nurseries Limited, Islington; The McConnell Nursery Co. Limited, Port Burwell and High Park Rose Specialists, Weston. The show space was indeed a mass of bloom and we are greatly indebted to the donors of these roses who have given loyal support to the show for many years — and we are also greatly indebted to those members who worked so hard having them properly displayed.

Introduced by our President, Mrs. J. H. Baillie, the show was declared open after a few appropriate remarks by Mrs. Schuyler C. Snively, a patron of many years and a staunch supporter of our Society.

A tour of the show benches prompted the realization that our show is gradually taking on an international setting. One of the

senior National Trophies, The W. J. Keenan Challenge Bowl for four specimen hybrid teas was taken home by Mr. F. H. Rogalski of Dearborn, Michigan. Another of the National Trophies, The Henry Bertram Memorial Trophy, was awarded to Mr. Orville E. Bowles for a bowl of specimen hybrid teas.

The sweepstakes award, the Sir Harry Oakes Trophy, went to Mrs. A. L. Naismith for her many very fine entries which gave great support to the show. It must be noted that in winning the Canadian Oil Companies special prize of a silver tray for the best white rose in the show Mrs. Naismith with a beautiful specimen of 'McGredy's Ivory' has won this outstanding prize for two successive years. Always a greatly coveted trophy, The P. H. Mitchell Challenge Trophy for the best rose in the show, went to Mrs. Alan Stollery for a lovely specimen bloom of 'McGredy's Yellow'. The sweepstakes award for the highest aggregate score in the Decorative Classes — a beautiful rose bowl donated by Mrs. Schuyler C. Snively — was won by Mrs. J. A. Lowe.

The newest trophy a beautiful award donated by The Red Rose Tea Company for the best red rose in the show appropriately went to Mr. F. Comper a newcomer to the show bench for a beautiful specimen of 'Ena Harkness'.

The Col. W. G. MacKendrick D.S.O. Challenge Trophy, awarded for the highest aggregate score in the novice section was won by Mrs. Maria Kertesz.

Special mention must be made of the magnificent airborne entries and this year the top honours were divided between Mr. E. N. Grant and Mr. A. Selwood of Vancouver and Mrs. R. A. Kerr of Lachine, Quebec.

There was much keen competition in the many entries that required the utmost in experience and knowledge in judging and our appreciation goes to Mrs. J. R. Colville, Mrs. T. J. F. Ross, Mrs. W. F. Ross, and Mrs. R. E. Rossiter who judged the Decorative Arrangements; and to Mr. D. McConnell, Mr. T. Graham, Mr. L. Laking, Mr. N. J. Scott, Mr. A. A. Norton, Mr. Carl Johnson and Mr. E. Mitchell who judged the Horticultural Classes.

To Mrs. R .M. Brophy and her committee of helpers goes our thanks for refreshments served the Judges and members of the Exhibition Committees.

Due to the very cool spring the number of entries were down from last year but in addition to the finely arranged tables the visitors enjoyed the educational lectures and demonstrations at intervals throughout the two days of the show.

Our Annual Shows require a lot of planning and preparation which starts months before the show date. This year with the show extending over two days for the first time an unusual amount of detail had to be arranged and to Mr. W. J. Keenan and his committee a great deal of credit is due for an excellent show under adverse conditions.

THE NATIONAL ROSE SOCIETY OF GREAT BRITAIN

This society, founded in 1876 and considered the mother society of many rose societies throughout the world, moved in 1960 from the premises at 117 Victoria Street, London that they have occupied for many years. The new property at Bone Hill, Chiswell Green, St. Albans will house the administrative offices and library and in addition provide space for the trial ground and a model rose garden to display all the most popular and latest varieties.

The society's membership has now reached 80,000 and they have outgrown the Royal Horticultural Society halls in Vincent Square where the summer shows have been held for many years. We understand that for the next three years the shows will be held north of London in the Alexandra Palace. The 1962 show will be held on Wednesday and Thursday June 27-28th. Several of our members have had opportunities in the past to visit these shows and all report it is a memory they will never forget. It is expected that the new location will be officially opened in July 1962 when the Princess Royal will be present.

Acti-Dione in Rose Disease Control

William C. Haskett

Plant Pathologist, Agricultural Research and Development
The Upjohn Company, Kalamazoo, Michigan

ROSES, like many other cultivated plants are plagued with a variety of diseases. The lofty position of the rose in the eyes of many gardeners makes the least amount of disease a threat to their goal of perfection.

The search for measures to prevent or control rose diseases has followed the logical pattern of developing good sanitation practices, breeding disease resistant varieties and utilization of chemical control measures. The development and refinement of these practices has made it possible for the average person to grow healthy roses.

The development of effective chemicals for the control of rose diseases has kept pace with the overall utilization of fungicides and bactericides in agriculture. The early use of sulfur and copper on grapes and potatoes soon led to their use on roses. The use of these basic inorganic materials provided the only means of preventing rose diseases for many years. Copper and sulfur are still important constituents of all-purpose sprays and dusts today.

The advent of the chemical era brought such synthetic organic fungicides as captan, maneb, dithane, ferbam, Karathane, Phaltan and many others. These highly effective fungicides have provided the rosarian with added tools to combat rose diseases. Despite their effectiveness, each material has certain limitations such as specific activity against only one disease, undesirable residues or plant injury under certain environmental conditions. The use of combination treatments has resulted in improved control of diseases but in some instances has accentuated the residue and injury problem.

What is required in a material to make it the ultimate as a fungicide for roses? The first criteria is that it must have a high

order of activity against the major rose diseases, black spot and powdery mildew. It appears almost too much to ask that it will also control rust, cankers, anthracnose and crown gall as well. In order to insure control, eradication of existing disease as well as the ability to protect against new infection would be necessary requirements. Long residual activity would be highly desirable. The treatment should not induce injury such as leaf burn, spotting the petals or stunting of the plants. Finally, it should not leave an unsightly residue on the flowers or foliage. Extreme residues are sometimes as objectionable as the disease we are attempting to control.

Certain basic concepts must be considered when developing or utilizing a fungicide for plant disease control. It is necessary for the particular chemical to come in contact with the organism or the immediate diseased area to provide eradication of existing infections. Failure to do this, because of poor spray coverage, or inadequate wetting properties results in only partial control. Diseased areas will continue to produce spores, which in turn will produce secondary infections and a resultant disease epidemic.

Uniform coverage is essential to provide protection against new infections. Unsprayed leaves or spraying only one side of the leaves provides an avenue of entrance for the organisms. After a protective spray is applied the leaves continue to grow and enlarge, and new shoots and new leaves are produced. These new areas of plant tissue are not covered with a protective spray and usually become infected, particularly in the case of powdery mildew.

Fungicides and other pesticides applied to roses are commonly subjected to the washing effects of rain and dew. The use of chemical additives to increase the "sticking power" of pesticides has been utilized by many rosarians with only mediocre success.

A possible approach to producing the ideal fungicide for roses lies in the use of chemicals which are capable of being absorbed by the plant and then trans-located to new growth areas. A fungicide of this type could be applied to the foliage or added to the soil. In addition to having this systemic property, the chemical must also be effective, safe and economical.

With the concept of systemic fungicides in mind, considerable attention has been directed to the antibiotics. In view of the striking

success of antibiotics in the therapy of human and animal diseases, it was believed that the same strides could be made in the field of plant disease control.

The search for antibiotics effective against rose diseases was directed to the problem of crown gall. Since the majority of antibiotics are bactericides as opposed to fungicides, this bacterial disease appeared to be a likely test case. The antibiotics Streptomycin, tetracycline, Aureomycin, Penicillin and others were evaluated with varying degrees of success. As a result of this experimentation, Streptomycin is now employed by some commercial nurserymen to control crown gall. Since this disease is largely eliminated before it reaches the home garden, the antibiotic treatment is not generally recommended or available to the individual grower.

The use of antibiotics for the control of canker diseases, anthracnose, and other minor diseases of roses has not been exploited. This is due in part to the seasonal and geographical limits of some of these minor pests. Antibiotics should be considered as possible control agents for rose rust. This particular disease, although not widespread, does cause serious losses in areas where environmental conditions are favorable for the growth of this specialized fungus parasite. Various antibiotics have been demonstrated to be effective against wheat rust, white pine blister rust and cedar apple rust. It appears that these same or closely related antibiotics might be effective against the rose rust organism.

Experimental testing of antifungal antibiotics for powdery mildew and black spot control has been undertaken by numerous researchers in rose test gardens. Although varying degrees of success have been reported with these antibiotics, only one, cycloheximide has been developed and marketed on a commercial scale. Cycloheximide is produced and sold under the trade name of Acti-dione* by The Upjohn Company.

Preliminary studies revealed that Acti-dione was very effective in controlling powdery mildew. However, the use of Acti-dione on roses induced a characteristic leaf burn and slight crinkle. In view of the high activity against mildew, special formulations were developed to minimize or eliminate this objectionable factor. A new patented formulation containing a spreader-corrective was produced

which provides effective mildew control with a high level of plant safety. Certain varieties of roses, known to be ultra-sensitive to Acti-dione will give a slight reaction when sprayed with this preparation. However, this typical pin-point necrosis of the new foliage is usually outgrown with the maturity of the leaves. This new formulation was named Acti-dione PM*.

Acti-dione PM is recommended for mildew control on hybrid teas and floribundas at two tablespoonfuls of material in one gallon of water. This is equivalent to one part of Acti-dione to each million parts of water. This very low rate of Acti-dione PM will effectively eradicate existing mildew on young leaves and flower necks. Under extreme conditions two eradicative sprays may be necessary. A higher concentration is recommended for climbing roses and various other ornamental plants.

Recent studies indicate that the use of one tablespoonful per gallon applied on a weekly schedule will effectively control powdery mildew. Various rosarians have used Acti-dione PM at this reduced rate in combination with captan, maneb (Dithane M-22 or Manzate) or ferbam. The use of Acti-dione PM with Phaltan is not recommended at this time. Rosarians and nursery men have also reported the use of Acti-dione PM with such foliar fertilizers as Rapid-Gro and insecticide mixtures such as Isotox. Since The Upjohn Company cannot control the composition of various fertilizers and insecticidal combinations now available, statements regarding their compatability and use with Acti-dione PM cannot be made.

In the course of powdery mildew studies, various test gardens have developed outbreaks of blackspot. Results indicated that Acti-dione PM is effective against black spot if the disease is light to moderate in severity and applications are made on a *regular weekly basis.* Under extreme conditions Acti-dione PM would not furnish a satisfactory level of control.

In addition to having the inherent ability to kill powdery mildew, there are other factors which contribute to Acti-dione PM's effectiveness. The ability to wet young foliage and flower necks when

*Trademark, for The Upjohn Company's brand of cycloheximide.

they are infected with powdery mildew makes it possible for Acti-dione to come into intimate contact with the fungus. The penetration of leaf surfaces by Acti-dione has been demonstrated with sour cherry leaves. This undoubtedly occurs in rose leaves as well. Numerous rosarians have postulated that Acti-dione is translocated from sprayed leaves to terminal growth. This may be true but no attempt has been made to demonstrate this phenomenon in controlled experiments.

In view of the striking control of mildew and moderate effectiveness against black spot, Acti-dione was combined with other fungicides which could provide additional black spot control. The most effective materials were mixtures of Acti-dione and either maneb or captan.

Field Trials over a period of years by Cornell University and the Texas Rose Research Foundation indicated that maneb was the most effective fungicide for blackspot control. Captan was effective and safe but higher rates were required to give a level of control equal to maneb.

When Acti-dione and Captan were combined at various levels it was found that low concentrations of these fungicides gave a very satisfactory control of both black spot and powdery mildew. A new product was developed containing Acti-dione and captan in a homogenous mixture. When used at the rate of three tablespoonfuls per gallon, the final spray solution contains only one-half part per million of Acti-dione. Whereas, captan is normally recommended at the rate of one and one-half pounds of active material in one hundred gallons of water; this spray solution contains the equivalent of only three-fourths pound in one hundred gallons. Field studies now in progress indicate that this recommended rate may be reduced further. This new combination product is sold under the trade name of Acti-dione Captan*.

Although Acti-dione has not fulfilled all of the requirements of the ideal fungicide for roses, it does furnish the rose fancier with a very effective tool. Acti-dione PM provides the rosarian with a true eradicative fungicide for powdery mildew. Acti-dione-Captan will provide satisfactory control of both major diseases. Acti-dione PM leaves no visible residue on the plant foliage; while Acti-dione-

Captan residues are considered very slight and not objectionable. Injury to certain varieties of roses is recognized. This is particularly true during periods of cool, cloudy weather or as a result of sprays being applied in the evening. The retention of the spray as a solution on the leaf surface for excessive periods of time makes injury more likely. Generally this slight necrosis on new growth is outgrown with the maturation of the leaves.

Recent preliminary studies at the University of Missouri utilizing synthetic derivatives of the antibiotic Acti-dione revealed that very low concentrations of antibiotic solution applied to the soil around potted roses resulted in systemic control of powdery mildew. This phenomenon has also been observed on leaf spot infected sour cherry trees. Further studies with these compounds are now in progress at several locations.

Investigations of this type may well discover the true systemic fungicide and make it available to rosarians the world over.

Rose Growing for Beginners

G. C. Warren, Dartmouth, N.S.

EACH year, as the march of progress goes on, the rose is molded to meet man's changing needs. In fact, in today's gardens for outdoor living, it has become almost indispensable. Surely no other woody plant can challenge the rose's supremacy in providing bloom over such a long period and among the many types can be found varieties for almost every situation and purpose.

The beginner in rose growing, however, is not much concerned with thoughts of this nature and his main purpose is to secure varieties at reasonable cost, and get them established quickly. His estimation of types and varieties will develop as time goes along. He could be helped in his selection of course, if he could be made to listen, but at this stage of the game he can be very well left to fend for himself. Later on, when he has time to see things in their proper perspective, he can usually be approached and directed.

Oddly enough, while the beginner often shys away from advice on varieties — especially if he thinks the suggestions may add to the initial outlay — he is usually willing and eager to take advice on soil preparation and planting. These are things, I suppose, that do not change much in value, and frequently one way of doing the work is just as inexpensive as another.

There has, of course, been a lot written on how to prepare soil for growing roses but, unfortunately, most of it is over the head of the beginner and much of it, in fact, is of little value even to the experienced grower. Let us be quite frank in admitting that roses are not much different from other plants in their soil requirements and are no harder to grow than many other plants including glads and dahlias. They do, of course, like a somewhat deeper soil than other plants and probably better drainage. They also like plenty of well-rotted barn-yard manure deeply worked into the soil, although

horticultural peat makes a very good substitute. Don't depend too much on peat, however, for the elements required for growth and flowering. Any well-balanced commercial fertilizer, of course, will make up for what the peat lacks just so long as it supplies the three so-called essential elements — Nitrogen, Phosphorus and Potash.

Almost every book on roses also recommends a liberal dressing of bone meal somewhere in the program and I am willing to go along with the suggestion, but not usually for the reasons given. Bone meal, is highly overrated as a fertilizer although it does supply a small amount of plant food in a very reluctant manner. I would prefer to rate bone meal as a very excellent soil conditioner, to be used in quite large amounts. Moreover, to get full value for the money invested, I suggest it be worked deeply into the soil well in advance of planting.

Planting roses is a different proposition altogether and the beginner would be well advised to adhere to the regular planting rules closely. Nina E. L. Marshall has outlined these for us in a bulletin of The Canadian Rose Society. They are seven in number and are given in the following order:

"(1) Select a site which receives at least four to six hours of sunlight per day. If the soil does not drain properly, install a layer of gravel or cinders at the bottom of the bed to carry off surplus water.

"(2) Always plant roses as soon as possible after they are received. After unpacking — and this is important — soak the roots in a pail of thick, muddy water. This coats the fine roots with a body of damp soil and greatly increases their chances of survival.

"(3) When making the holes to receive the plants, make them large enough to accommodate the roots without crowding, and deep enough to place them at their proper depth. The bud or graft is the focal point for determining the depth at which the plant should be set. This bud union is always marked by a knobby or swollen area immediately above the roots, which should be placed just below the soil level.

"(4) After the plant is placed in position, spread the roots downward at a forty-five degree angle to avoid one root touching

the other. The roots should then be covered with loose soil, working it well underneath so that the roots are in a firm position.

"(5) After the preliminary planting, fill the hole about three-quarters full and tamp the soil down firmly. After this has been accomplished, pour in about a half bucket of water and allow it ample time to soak into the ground. Finally, fill the hole with earth. It is also a good plan to mound the excess soil around the canes to a depth of several inches and cover with a mulching material or insulation. This hilling prevents the canes from drying out, but it should be removed within ten days to avoid injury to the developing buds.

"(6) Most growers feel that roses should not be given extra fertilizer the first year — assuming, of course, that the rose bed was properly fertilized in the beginning.

"(7) And lastly, when your roses begin to bloom, be careful not to remove any foliage from the plants. The leaves, of course, are the plant's lungs, so for the first summer at least, cut your roses without foliage and use them as "floaters" in a bowl."

To the points outlined by Mrs. Marshall, I might add a further one which she neglected to mention — pruning. All newly-planted roses, if not previously trimmed, should be cut back at planting time to three or four strong shoots. And these, in turn, should be reduced to three or four inches of growth. This initial pruning is very important and many failures can be traced to leniency in this regard at the time the plants were set in position.

Once planted, the rose bushes, aside from weeding, should grow for a time at least without much attention — that is until diseases and insects get on the move. There are several good all-purpose rose sprays on the market and these should be used by the beginner for the first year at least. Just so long as you use these materials according to directions, the results should be satisfactory.

The one remaining point I would like to bring out is winter protection. Many methods have been advocated, but I suggest for the first year at least, you adhere to the method most generally practised by growers. This is soil mounding the bushes to a height

of eight or more inches. The soil used for mounding should be brought in from some other part of the garden as mounding with soil dug from around the bushes may lead to root injury or worse.

And while I said in the beginning that beginners were generally not interested in special varieties, I am going to list twelve which he can take or leave at his discretion — I assure him that these will add little to the overall cost. These are: *Hybrid Perpetual* — 'Frau Karl Druschki'; *Grandiflora* — 'Queen Elizabeth'; *Floribunda* — 'Frensham', 'Fashion' and 'Vogue'; *Hybrid Teas* — 'Peace', 'Crimson Glory', 'Ena Harkness', 'Kordes Perfecta' and 'Virgo'; and *Climbers and Ramblers* — 'Paul's Scarlet' and 'New Dawn'.

Silver Lining

Hybrid Tea, raised by Alex. Dickson & Sons, Newtownards. Gold Medal Award (1958) and Clay Gold Vase (1957) for the best scented new rose of the year. Award of Merit by the Royal Horticultural Society. Considered the best British raised rose in years and selected by The National Rose Society for presentation to Her Majesty the Queen to commemorate the birth of Prince Andrew. A bed of 125 bushes were planted in the fall of 1960 immediately under the window of Her Majesty's private study and we understand from Mr. Alex. Dickson that they are doing well.

'SILVER LINING' (H.T.)
Raised by Alex. Dickson & Sons, Newtownards
Trial Ground No. 1279. Reg. No. 471. TRIAL GROUND CERTIFICATE
Certificate of Merit 1957 and the 'Clay Cup' for fragrance
Reproduced by kind permission of the National Rose Society of Great Britain

Control of Blackspot and Powdery Mildew

W. D. Pamenter
Rohm & Haas Co. of Canada Ltd.

IN the past few years, researchers have determined that the fungicide most effective against blackspot is a chemical called manganese ethylene-bisdithiocarbamate. A shorter name for the substance is "maneb". This fungicide offers excellent control of rose black spot (Diplocarpon rosae Wolf) according to tests conducted by the Texas Rose Foundation, Cornell University, Pennsylvania State University, and others. Two maneb preparations, Dithane M-22 (Rohm & Haas Company) and Manzate (E. I. du Pont de Nemours) are reported as giving an excellent measure of disease control.

The tests by the Texas Rose Foundation were conducted on a large commercial scale. They established, among other things, that a plant's general hardiness — its over-wintering strength — was related to the condition of its foliage. Since rose black spot is a defoliator, the control of the disease leads to healthier, better-looking plants. Unrestrained black spot may result in the stunting or the killing of a plant. The fungus is epidemic during warm, rainy weather and, once established in a rose garden, may cause expensive and widespread havoc in the course of a single growing season.

The results of the tests conducted in Texas and at the two universities should be useful to the small scale rose-grower, the rose-hobbyist, and to any others who try their luck with some variety of rose in their home gardens. In general gardens, where there may be several varieties of ornamental plants as well as roses, the maneb sprays would also provide control against such diseases as leaf spot on carnations, chrysanthemums and zinnia; Botrytis on dahlias, lilies, gladiolus and peonies, and certain other diseases of flowers.

Some maneb preparations are available through the usual garden supply sources in quantities appropriate to small users. Such retailed mixtures may also include other fungicides and insecticides to make a single product that will serve as an all-purpose garden spray. However, for rose-growers who like to mix their own sprays an effective black spot fungicide may be prepared, for example, from a level tablespoonful of Dithane M-22 per gallon of water. This mixture could be applied by hand sprayer or by light power equipment. For best efficiency it is always a good idea to add a small amount of some wetting agent to the formulation to help the spray wet the foliage and spread evenly over the leaves. Triton B-1956, is frequently used for this purpose.

The dramatic results obtained from the use of maneb encourage rose growers to use this compound in routine rose care. Obviously, an important consideration in applying the maneb sprays is to insure that such treatment is systematic and thorough. Generally, the spray program should start in the spring and continue on a weekly basis throughout summer. Both foliage and canes should be thoroughly covered by the fungicide at each treatment. Regular weekly application is recommended since it has been found that a seven-day spray program is needed to keep the foliage protected at all times. In Texas, for example, an attempt to reduce the frequency of spraying late in July resulted in a prompt return of the disease.

In at least one test, the progress of the plants under spray treatment was measured in terms of weight gain. This method of measuring plant health is practical only at the commercial level of operation where large numbers of plants are harvested regularly for resale. It was reported that weight gains among maneb treated plants ranged between eighty and ninety-three percent. This gain was better than that among plants treated with other fungicides.

KARATHANE FOR POWDERY MILDEW

Just as warm moist weather encourages the onset of black spot, warm dry weather, varied by intermittent periods of cool, cloudy weather and high humidity, tends to encourage the growth of powdery mildew on roses. This disease may affect all parts of the rose plant above ground although it is most prevalent on the leaves and terminal growth. Easily recognized by its white spore masses

which give a powdered-sugar appearance to the infected areas, the disease causes the young leaves and growing tips to become twisted and mis-shapen, resulting in dwarfing of the plant and destruction of the stems and buds.

Powdery Mildew is effectively controlled with Karathane, Rohm & Haas Company's trade mark for an agricultural fungicide-miticide based on dinitro (1-methyl heptyl) phenyl crotonate and supplied as a wettable powder or liquid concentrate. Karathane is the recognized fungicide for eradication and control of this disease. While it is usually easier to prevent a disease than to cure one, the grower may wait until the mildew is present before adding Karathane to his spray program. Once the disease is observed, however, Karathane should be applied immediately and regularly to prevent further spread of the fungus. Maneb and Karathane are compatible and may be applied as a combination spray or in combination with many insecticides.

It is reported that the general field use of a combination maneb and Karathane spray for the control of black spot is highly effective even in areas where particular varieties have shown a build-up of disease prior to the start of spray treatment. The spray should be applied once a week for at least four weeks or until the arrest of the disease. When the infestation has been halted, less frequent spraying may be sufficient to maintain continuing control.

Pruning Your Roses

J. H. Eddie, Vancouver, B.C.

PRUNING is done to ensure the production of the maximum number of quality blooms and secondly to encourage vigorous growth on a healthy, well-balanced plant.

Vigorous growing varieties should not be pruned as severely as weak growing varieties. This may seem paradoxical but the soundness of this rule is apparent after a close study of results obtained from some years of experiments.

In the spring, a well-established plant of 'Peace' or other similar strong growers should, first, have any winter damage or late soft growth removed. The remaining strong healthy stems should be cut back to 3 or 4 buds from the base of the previous season's growth. This will encourage strong, new shoots to develop on which an abundance of good quality flowers will appear. Each succeeding year the plant becomes larger.

Light growing varieties like 'The Doctor', for instance, should be pruned severely. Leaving the stems longer, merely because the plant is weak or small, will result in more weak shoots and mediocre flowers. Pruning hard eliminates the weak shoots and results in stronger new stems with superior quality flowers.

Basically these suggestions may be applied to practically all of the modern roses. There are some exceptions which will be dealt with later. In addition, however, there are some further suggestions to bear in mind.

An open rounded plant is preferred to a tall, centrally branched "leggy" plant, therefore prune out some of the stems in the centre. The bud immediately below the severance point of the remaining stems should be pointing outwards. Similarly, remove branches which tend to cross to the centre of the plant. Also, branches which

are so close that they are likely to rub together should be removed. The pruning cut should start a quarter inch above the selected last bud and slope at an angle to the opposite side of the stem and come out at a point about level with the bud. The cut ends of the stems should be covered with a suitable tree salve or wax to prevent rotting.

Good pruning equipment is important. Expert pruners prefer a sharp pruning knife to pruning shears because a cleaner cut can be made and with less danger to the stem. Pruning shears are satisfactory, however, but keep them sharp. A dull cutting blade requires greater pressure resulting in split stem ends and injury to the bark. Some pruning of roses should be done during the growing season by pinching out soft new shoots which are crossing or otherwise seem to be coming in the wrong places. This helps conserve and directs energy to the remaining stems. Continual removal of spent blooms is also important.

Pruning for exhibition is essentially the same as for general garden purposes except it should be more selective, leaving fewer stems and flowers which should, other factors being equal, result in superior quality blooms. Remember, however, unnecessary severe pruning is detrimental to the plant creating an unbalanced condition between top and root system. The plant maintains a reserve of plant foods including carbohydrates which are stored in the cells of the lower branches.

Pruning freshly planted roses is simple. Prune hard, right down to 3-4″ of the graft for all bush roses; 6-7″ for climbers. More transplanting losses are attributable to improper pruning or the lack of it at this time than any other cause.

Hard pruning may appear to contradict the previous instructions but we are dealing with newly planted roses on which the roots have already been pruned by digging. Hard pruning helps restore the balance between top and root and a more vigorous new growth will result.

The time to prune varies with the season and the locality. It should not be until practically all frosts are past. On the west coast this is usually March 1st to 15th. In southern Ontario April 1st to 15th and on the prairies May 1st or later.

In the fall a light trimming is recommended after the first killing frosts have spoiled the blooms and foliage. Remove the old flower heads, soft tip growths and weak, diseased growths, rake up and burn. This will improve the appearance of the bed, should result in less disease the following season and lessens the chance of wind whipping the plant about during the winter causing damage at the ground level. This is a light trimming, not a pruning. If you take off too much wood in the fall the winter may take more and there will be little or nothing left to start with the following season.

Established modern hybrid tea roses and floribundas should be treated as recommended above with the exception that floribundas, being mainly intended for mass display purposes, need not be pruned as severely as the hybrid teas. The so-called grandifloras, being vigorous growers, should be pruned lightly.

Roses of Pernetiana parentage resent severe pruning as do Tea roses but few of the latter are grown in Canada. The old Frau Karl Druschki responds best to light pruning. Hybrid Perpetual roses need little pruning until the third season when excess weak growths should be removed, also two or three of the oldest stems; the remaining one and two year stems will provide the best show of bloom. They should be shortened by about one third to encourage lateral branching.

Shrub roses, such as varieties of R. centifolia muscosa, damascena and spinosissima should be pruned as recommended above for Hybrid Perpetuals.

Repeat flowering shrub roses such as rugosas, bourbons and hybrid musks need continuous removal of spent blooms to encourage more buds, bearing in mind those which set colorful seed hips should have some flower heads left for winter effect.

Some of the old Austrian brier types seem to perform best when left almost completely alone except for infrequently removing one or two of the oldest stems.

The climbing varieties of roses in gardens today are so varied in their background it is difficult to give recommendations in a few words to cover them all. If in doubt, prune sparingly.

Generally speaking, most climbers, excluding ramblers, flower best on the stems which are two or three years old. The object should, therefore, be to encourage maximum results from the selected three to five main canes, two of which might be three years old; the other three, 2 years old. Each spring remove at least two of the oldest canes completely, shorten extremely long growths back to 8-10″. Side laterals should be cut back to two or three buds from the main stem. During the growing season, light pruning should be done to remove excess new shoots coming from the base of the plant leaving, of course, two or three of the most vigorous and best spaced new shoots to develop during the growing season for replacement of the old spent canes to come out the next spring.

Ramblers bloom best on the young wood, therefore, immediately after blooming in the early summer, remove all the canes which have flowered. There will be a number of young, new stems coming from the base of the plant; select four or five of these and remove all in excess. The selected canes will be quite tall and vigorous by the end of the growing season thus assuring an abundance of flowers for the following season.

Breeding for Hardy Everblooming Garden Roses

Griffith J. Buck

Department of Horticulture, Iowa State University, Ames, Iowa

QUITE a number of years ago, when rose-growing was in its infancy in the United States, Dr. McFarland wrote *The Rose in America,* purporting to show that the rose was a well established garden plant in America. We have come a long way since that time. If the thesis of Dr. McFarland's book was true then, it is even more so now. However, one must be realist and accept the fact that the rose is at home in America only in those areas with relatively mild all-year climates. In areas with hot and dry summers, cold winters, or both, the rose is more frequently a transient guest than a permanent resident.

With this in mind, the breeding program at this station was designed to produce garden roses adapted to the climatic extremes of central North America in general and that of Iowa in particular. To do this it was necessary to proceed in two directions: Develop (1) cultivars capable of growing efficiently during periods of hot weather — summer hardiness — and (2) those capable of surviving sub-zero temperatures without injury. Lack of summer hardiness is a subtle trait to determine. It is characterized by a tendency of the plant to become prematurely dormant; produce small, chlorotic foliage, or in extreme cases to defoliate completely; and produce small flowers deficient in color, petalage and form. These are the symptoms. The net effect is to reduce or delay maturity with the consequent failure to achieve the maximum winter hardiness. And so, plants are lost due to "winter-killing".

One of the salient points in this work is that the two characteristics of summer and winter hardiness must not be developed at the expense of those traits which gardeners consider essential in a garden

rose. This point has been ignored many times in the evolution of garden roses with the result that rose cultivars, with pronounced fragrance, unusual color, or similar trait, but lacking many of those required in good garden roses have been introduced. These are quickly forgotten. Cultivars possessing one trait in abundance and lacking other desirable ones seldom become garden classics.

The rose is essentially a cool season plant. Its most efficient growth is made at cool temperatures — 55 to 65°F. night temperatures. Rose seeds germinate at 41°F. This temperature-growth relationship is typical of plants adapted to cool environments. It is axiomatic that temperature-tolerant selections may be developed from cool season plants. This has been done in the case of our *Pelargonium hortorum* (Geranium) cultivars Pink Cloud and the soon to be released Cardinal. There are a number of vegetables in which this has been done, also. The problem was: could this be done with garden roses?

Rose cultivars known to grow and flower well under high temperatures formed the nucleus of breeding material for this venture. Among those found to be unusually heat tolerant were the cultivars 'Peace', 'Dean Collins', 'Florence Mary Morse', 'Mrs. Nieminen' and 'Crimson Glory'. By intercrossing these and using other selected clones, plus very rigid selection, it has been possible to build up a strain which has a high level of heat tolerance not only with respect to growth and bloom, but also to foliage retention. This strain and its ancestral cultivars have contributed the seed parents for the second phase of our breeding program.

In breeding for cold-injury resistance it is necessary to use materials of super-hardiness. The ancestral species of our garden roses developed in areas with relatively mild, or even warm winters. Factors for superior winter hardiness are missing from their genetic constitution. Thus, to supply this missing character, it is necessary to use species roses which do carry the factors for superior hardiness. Two rose species have been found to fit this requirement: *Rosa laxa,* Retzius, *Rosa fedtschenkoana.*

Rosa laxa came into the breeding program almost at its inception upon the advice of Dr. F. L. Skinner, who had been using it for several years. Dr. Skinner had made many combinations with this

species and types hardy in his latitude and felt that it was a worthwhile source of breeding material which had, up to that time, not been used. With the emphasis here being upon the production of Hybrid Teas and Floribundas of superior hardiness, the first step was the production of primary hybrids between the species and garden roses. The initial attempts were disappointing. *R. laxa* failed to set seed with foreign pollen, and when used as a pollen parent, the seed set was disappointingly low. The plants coming from these early crosses either were lacking in vigor and hardiness or were extremely vigorous and hardy. In either case the flowers were grossly misshapen.

In 1952 *R. laxa* pollen was used on one of Kordes' Sweetbrier hybrids, 'Josef Rothmund'. One pod matured containing eight seeds which produced five plants. All were hardy, withstanding —30°F. fully exposed without injury; relatively dwarf, averaging 3-4 feet in height; and very bushy. Four bore single, white flowers and had foliage which was lost by early August. The fifth had semi-double flowers of pale salmon-pink and persistant foliage. This seedling was selected for further use in breeding and is known as 52285-5.

The pollen from this seedling is extremely viable, resulting in combinations with a wide range of seed parents. The most successful progeny came from combinations with Kordes' Sweetbrier Floribunda roses 'Florence Mary Morse', 'Harmonie' and 'Feuermeer', and the Damask, 'Saint Nicholas'. The seedlings are slow to mature, often requiring 4 to 6 years, so that the raising of succeeding generations is a slow process. Two dilutions of Hybrid Tea and Floribunda blood, however, have not appreciably lessened the total hardiness of the *laxa*-Rothmund parent, while imparting quality to flower and foliage. With maturity, recurrent bloom is appearing in many of these *laxa*-Rothmund grandchildren. This is most gratifying, for these recurrent plants had consistently been among the hardier ones, having brought canes alive to heights of five and six feet through five normal Iowa winters in which the temperature has fallen to —20 to —30°F. for extended periods.

Rosa fedtschenkoana came into the breeding program in 1955, the plants having been obtained from T. Hilling and Co. of Woking, England. This species promises much. It is very hardy, and when established, flowers continuously, if not profusely, all season. Field

notes record open flowers and buds in many stages of development in late October. The early use of this rose as a parent is similar to that of *Rosa laxa*. It is almost useless as a seed parent, and its pollen is poor. The seedlings from it to date are vigorous and have the silvery-green foliage of the species. The flowers vary in petalage from 5 to 15 petals. The superior hardiness of the species does not appear to be greatly lessened by the garden rose parent.

To date two populations of mature plants have been produced. The oldest came from a combination with 'Dusky Maiden' as the seed parent. The progeny are vigorous and resemble the species in growth and plant characteristics. The seed parent influence is visible in the large pink flower, large foliage, and intermediate hardiness. There is a tendency to recurrent bloom. One selection from this cross, 56339-8 has fertile pollen and is reasonably fertile as a seed parent.

The other population came from 'Josef Rothmund' as the seed parent. The only effect of the seed parent here is the larger, double flower and a tendency to precocious blooming. Recurrent flowering has not been evident, but may appear as the plants mature. The best of this progeny has been 57219-2 which when used as a pollen parent, has produced seed on a wide range of garden roses. Hardiness in Josef Rothmund progeny is the equal of the species parent.

These preliminary results have been encouraging. They are the basis for a reasonable assumption that it is possible to produce truly hardy, everblooming garden roses.

Exhibiting Roses

Margaret E. Dove

THE first step, a very important one in the preparation of roses for the show tables, begins with a careful selection of varieties for planting. Several bushes of top-flight exhibition varieties should be grown rather than one each of many varieties; some good, some indifferent. Obviously, the gardener with a number of bushes of one variety from which to choose his bloom on show day has a great advantage over the gardener growing only one bush of the same variety.

The *Rose Analysis,* as found in *The Canadian Rose Annual* each year, will prove invaluable to those seeking advice on widely-grown proven varieties, and as a rule reputable nurseries recommend only the best of the new introductions.

The exhibition rose, the decorative rose, and the rose intended for general garden purposes differ in several ways. The exhibition type will have a high well formed centre and many petals forming a circular outline. The decorative type will have a rounded rather loosely formed centre and will be less perfect and less regular in form. The rose intended for general garden display and indoor cut bloom may be a lovely rose for these purposes but if the stamens show when the blossom is open it is judged 'too thin' or 'shy of petalage' and will stand little chance of winning a prize on the show table.

To obtain fine exhibition rose blooms disbudding must be conscientiously practised. This is done by pinching out the tiny side buds with thumb and finger almost as soon as they are visible. When the operation is performed at this early stage there will be no scar or evidence of disbudding; also food and strength that would have gone to the side buds will have been directed into the terminal bud. In specimen bloom classes side buds count as extra blooms

and if the exhibitor has failed to disbud his entry will be disqualified. A judge will also penalize an exhibit for evidence of recent disbudding.

Specimen blooms of hybrid teas, climbing teas, climbing hybrid teas, hybrid perpetuals, and climbing hybrid perpetuals must be grown disbudded for show purposes. Polyanthas, floribundas and the climbers as well as grandifloras are usually judged as naturally grown flowers and are shown without disbudding.

When polyanthas and floribundas are being judged the inflorescence as a whole is considered. The spray of bloom should be of good form with proper spacing of florets and with the number of flowers — in a proper stage of development — being crisp and fresh. A spray having tiny buds, one or two open blooms, and some faded flowers stands little chance of being considered.

The grandiflora class now has a number of varieties and is usually exhibited separately. Here the judge will likely forget about the inflorescence of the floribunda spray and will adopt the method used in judging hybrid teas — the better the form the higher the score. If however the exhibitor has to choose between two grandifloras, one with an almost perfect single bloom and the other with several buds and blooms, the latter will stand the better chance of winning; provided all the parts are in proper condition.

Single hybrid tea varieties such as 'Dainty Bess' are displayed and judged as naturally grown flowers and are not disbudded.

Good grooming is very important for specimens on the show tables. Unsightly spray or dust residue, indication of disease or insect injury, poor foliage and blemished flower petals are all considered faults.

A blemished petal may be deftly removed before exhibiting if it does not destroy the character of the bloom; also a petal may sometimes be arranged a little better by the careful use of a small camel hair brush. However, good cultural practices must be observed throughout the entire growing season of the rose if damage by insect pest, disease, or spray is to be avoided. Last minute grooming cannot obliterate these faults and when they are visible the exhibit is penalized.

It is difficult to state at exactly what stage a bloom should be cut for exhibition purposes. Weather conditions to a great extent affect the keeping qualities of a bloom. In cool weather the bloom develops slowly and when cut lasts longer than in hot weather; conversely a bloom develops quickly in warm weather and on a hot day a cut blossom deteriorates rapidly. At the time of judging, an exhibition rose should be in its most perfect phase of beauty, which we are told is usually one-half to three-fourths open — except single roses.

The exhibitor may retard bloom from opening too quickly in the garden by cutting and immersing the stems up to the bloom in chilled water and then storing in a cool dark place. Blooms slow in opening may be hurried along by exposing to indoor warmth until they reach the desired stage. Some exhibitors start cutting their roses several days ahead of the show if the bloom has reached the right stage and they have the proper facilities for cold storage.

Roses must be well conditioned if they are to stand up on the show table. They must be picked with a good length of stem in the early morning or late afternoon of the day before the show. They should be severed with a slantwise cut the ends slit up a bit and the whole stem, up to the bloom, plunged immediately in a container of tepid water and placed in a cool, dark, draught free spot for several hours.

The extra chore of first giving roses the hot water treatment is recommended for decorative work. Lower thorns and leaves are removed, stem ends split, and placed in about two inches of water at 115°F. where they are allowed to remain until the water becomes cool when the stems are placed in the deeper container of water and conditioned as stated above.

When show day arrives the bloom should be transported in water if at all possible. To carefully protect the bloom from injury each blossom should be carefully wrapped in soft waxed paper and during transit should be kept as immovable as possible. Care must be taken to protect both bloom and foliage from damage by thorns.

If it is not feasible to carry blooms in containers of water each specimen may be wrapped separately in soft waxed paper and laid in cardboard boxes lined with damp newspaper. A roll of damp

newspaper placed under the neck of the blooms, and pliofilm bags filled with crushed ice placed at the base of the stems, keep the roses damp and cool.

During recent years some exhibitors have discarded the foregoing conventional procedures, cutting and preparing roses for the show in the following manner.

As the rose buds become soft but before they actually start opening they are cut with 12 to 15 inch stems. At the time of cutting damaged leaves and petals are removed, excess moisture carefully wiped from foliage and bloom, and soft waxed paper wound around the stems to prevent damage from the thorns. The rose is then labelled and without having been placed in any water is laid on a piece of pliofilm cut a few inches longer than the stem. The lengthwise edges are then brought together, folded and refolded in a fairly close wrapping around the rose — taking care not to injure the bloom — and the ends are sealed to make the package air tight. Some exhibitors first make suitable sized bags of pliofilm into which they slip the rose. Whatever procedure is used the wrapping must be air tight.

The packaged roses are then stored in a refrigerator and will be safe up to 14 days if the temperature can be kept at 33° - 35°F. At higher temperatures the keeping quality will suffer.

Roses are removed from the refrigerator about five hours before the show, the stem ends opened and an inch or so of the stem cut off. They are then placed in a container of warm water, three or four inches at 115°F., and put in a cool place for three or four hours before taking to the show — in the same container and still in their wrappings. On arrival the wrappings are removed, stems re-cut and roses placed in water-filled specimen containers. The exhibitor transporting roses a long distance should leave them in the refrigerator until the last possible moment, pack them to keep as cool as possible, and then cut the stems and place in warm water on arrival at the show.

The exhibitor should obtain a copy of the show schedule or prize list well in advance of the show date. The schedule should be studied and the rules and regulations for exhibitors noted particularly and then with a thorough knowledge of the general rules

limiting each class a decision can be made as to the classes to enter. The exhibitor should know that it is a better plan to enter a few classes in which first class blooms can be displayed rather than to display together good and mediocre blooms in many individual classes. For example when there are two good specimens and one poor specimen of the same variety he should not enter in a class calling for three blooms; it would be a wiser plan to enter the better of the two good specimens in a class calling for one bloom.

The exhibitor should arrive at the show in ample time to stage the entries, secure and fill out correctly the entry cards and place them with each entry; he should come supplied with all the necessary mechanical aids and not rely on borrowing from other exhibitors. Again the schedule should be checked to make sure the right classes have been entered, roses correctly labelled and water put in containers. Then as a last touch the spraying of a light mist of water over the exhibit completes the work and he should leave the hall before the judges commence their work.

Judges will examine a rose for form, colour, substance, stem, foliage, fragrance and size. Under form or shape they will look for a well formed centre, a circular outline with petals open enough so that the arrangement of the petals and the form of the centre of the rose may be seen. When a rose has opened so that it commences to lose its symmetrical arrangement of petals and the well formed centre it is obviously past its prime and will lose points.

Colour includes freshness and brilliancy according to variety. Points are deducted for fading, lack of high sheen, thrip damage, discolour from insecticides and fungicides, weather stains and over-time hardening.

When judging for substance the rose must have stability and durability, crispness and good form. Faults are, lack of texture, finish, crispness and stability of form. Lack of freshness is plainly indicated by the stamens in the single and hybrid polyantha roses; in exhibition type roses the stamens cannot be seen.

Stems should be adequate to hold the bloom upright above the foliage and the faults would be stems too long for bloom or stems too heavy and out of proportion to bloom, lack of disbudding or evidence of too recent disbudding. No thorns should be removed.

Foliage will have points taken off for lack of clear colour typical of the variety, lack of adequate foliage for bloom, unevenly spaced leaves, spray residue, disease, insect damage and dirt.

Where fragrance is a specific requirement for which points are given it should be fully taken into consideration when selecting blooms in the garden.

Size: Undue consideration is not given to an exhibit because of its size. There should be no extremes; the bloom should be full size for the variety and be in proper proportion to stem and foliage.

The New Roses in Great Britain in 1961

Sam McGredy, Portadown, Northern Ireland

A ROSE Breeder has three chances to get a Gold Medal for his creations during the flowering season. There are two "National" Shows held in London, one in June, the second in September. As well, there is a "Provincial" Show held at Leeds in Yorkshire in early July.

At the Summer Show, Paddy McGredy, Orange Sensation and Westminster took top honours. Paddy McGredy is a deep pink, overlaid salmon floribunda, carrying an enormous number of big, full flowers of hybrid tea quality. Orange Sensation is probably the brightest orange floribunda to date with masses of small double blooms. Westminster, the only hybrid tea in the group, had been in circulation some time, but its huge rather coarse red and yellow fragrant blooms were in good form at the Show and deserved their award.

Much to my surprise the orange yellow floribunda Zambra could only muster a Certificate of Merit. Talking to Walter Gregory after the judging we felt that the President's Trophy, to be awarded in the autumn, would lie between Zambra, Orange Sensation and Paddy McGredy as these were the three outstanding roses in the Show.

The Leeds Show caught the tail end of the first flush of bloom. Mischief, which had received a Certificate of Merit in London, and Dearest, a Certificate winner in 1960, were raised to Gold Medal Awards. Mischief has a wonderful plant underneath it and the deep salmon flowers are big and perfect enough for any exhibitor. Dearest is that rare thing, a very fragrant, rose pink floribunda.

Coming up to the Autumn Show therefore, we had five contenders for the President's Trophy, plus any Gold Medallists at that Show. Lilac Charm and Dorothy Wheatcroft joined the list. The former is a very dwarf, single lavender floribunda with bright golden stamens. Dorothy Wheatcroft has huge mop heads of flaming scarlet single blooms. It really is a shrub rose and a most spectacular one.

At the Show, I had Paddy McGredy staged very badly. It was right off its true form. I was rather downhearted as Gregory had a brilliant display of Orange Sensation. Zambra was out of the running and I didn't really feel that any of the other varieties were well enough exhibited to carry off the Cup.

There must have been a real tussle amongst the judges to find the winner. In the end my Mischief just scraped home. I think it's good performance at the Trial Grounds just made the difference. It was my first President's Trophy winner and naturally I was delighted.

Looking back on the season now I would list my outstanding roses as (1) Paddy McGredy, (2) Orange Sensation and Mischief, (3) Zambra, (4) Dearest. Had we shown Paddy McGredy well I think it must have won. However, who ever heard of an exhibitor whose roses were just right on Show Day? It was an exciting end to a wonderful season.

Leaf Mould

R. Warren Oliver

FOR centuries, men have been confident that the application of barnyard manure in a fair state of decomposition, was the optimum treatment for "keeping the land in good heart". Since this commodity has become scarce, we have claimed that leaf mould or peat moss together with commercial fertilizer, was the best substitute. This, like many other agricultural practices founded on observation, is now not considered sufficiently accurate for scientific results. Even our old friend barnyard manure is criticized because of its lack of uniformity.

Very thorough work on the preparation of potting composts has been done by the John Innes Horticultural Institute in Hartford, England and by the University of California Agricultural Experiment Station. The first was interested in compost soils for pot plants; the second in a uniform medium in which to grow nursery stock in cans. Both found that lack of uniformity resulted when natural manures or leaf mould were used in the composts.

Both were thinking in terms of uniform physical texture and chemical analysis, growing plants under controlled conditions, rather than in garden soil.

It is generally recognized that leaf mould varies in nutritional value according to the tree species, the state of decomposition and the conditions under which decomposition took place. Experiments have shown for instance that better quality leaf mould results from thin layers of leaves in a forest than from deep piles in a garden.

It has been found experimentally that maple and birch leaves decompose more quickly than beech, oak or poplar. That the former contain nitrogen which is liberated more rapidly. The latter group contain more mineral elements in the ash and more lignin which resists recomposition and consequently they have more lasting value as soil conditioners.

De Long and others working at the Macdonald Agricultural College, Ste Anne de Bellevue, Quebec found the leaf fall on a three year average varied from a ton and a half (dry weight) per acre for maple to three quarters of a ton for poplar. The analysis of newly fallen leaves was as follows:

	Beech %	Birch %	Maple %	Poplar %
Nitrogen	0.81	1.12	0.83	0.84
Ash	9.44	7.21	12.33	9.41
Lignin	24.03	21.07	15.49	20.02

Generally leaf moulds run about 1% nitrogen and considerably less than that in phosphorous and potash. The chemical value to the plant when used as a fertilizer is not therefore very high. It is the decomposing organic fibre resulting in humus that is of real value as a soil conditioner.

It is a mistake to think of garden soil as a treasure chest containing chemical elements that remain in their present state on which plants can draw as they need. If this were true (as it is almost true in sterile media under controlled conditions) application of fertilizer would become a fairly simple matter of mathematics.

Experimental work has shown that roses, like many other woody plants under sterile conditions, get along admirably on 30-40 parts per million of nitrogen, 5-8 ppm available phosphorous and 40-50 ppm potash. Analysis of our soil would show us the ppm it contained of nitrogen phosphorus and potash. Simple calculation would show us the amount needed to make up the desired total. Assuming that a cubic foot of soil weighs one hundred pounds, the presence of 2 lbs. actual nitrogen, ¼-½ lb. soluble phosphorus and 2 lbs. potash in the top 6″ of soil over an area of 1,000 sq. ft. would fill the chest to the required level.

Natural loam, however, is more like a chartered bank. You deposit cheques and cash which through loans are changed into houses, railroads or industrial development. Some projects pay dividends, a few lose, but the over-all result pays enough to satisfy reasonable demands of the depositors.

Mineral soils composed only of particles of sand, silt and clay are fairly staple and inactive. Growth on them is poor. Good garden loam is a seething cauldron of bacterial and chemical reaction from which nutrient elements are released in soluble form for plants to use or to run out in the drainage water. Or these elements may be tied up in insoluble form to become frozen assets.

The creative power for this activity, comes from the presence or addition of organic matter, not so much because of its chemical analysis but due to the living content of many groups of bacteria and forms of fungi which are known as the microflora of the soil.

So long as there is life in an organism, raw food elments are absorbed and built up into more complicated foods such as carbohydrates, proteins, fats, etc. the minute life ceases, "change and decay" commences.

In the soil or on the compost pile, the decay of plant tissues is brought about by the action of various groups of bacteria and fungi. Though these are forms of plant life, they have no chlorophyll and therefore no ability to build up the starch and sugar they need. In order to survive, they must break down the dead tissues of plants and animals to release these foods for themselves.

In doing this, they also release nitrogen and mineral elements partly for their own use and the balance to be absorbed by other plants in order to build up fresh proteins.

It is a never-ending cycle with animals, plants, minerals, bacteria, chlorophyll, the energy of sunshine and the grime of smoke all interlocking. It was well planned and had worked over hundreds of millions of years before man thought much about it. Though we like to think of ourselves as the highest product for whose benefit it was developed, we are just a part of and should be everlastingly grateful for it. Men have been trying to understand and improve cultural practice for a few thousand years but little of its mystery was understood until our increasing knowledge of chemistry and mycology over the last hundred years has revealed it bit by bit.

The cycle was in motion before the leaves fell from the tree. By this time, much of the sugars and starches, the nitrogen, phosphorus and potash have been transferred to food storage tissues in the trunk

and branches. Consequently, it has been found that compost made from young growing leaves is much richer in nitrogen and minerals than that made from leaves gathered in the fall. As decomposition continues the chemical value of compost changes.

Analysis of plant tissue generally shows that it is made up of 75-85% water, 10% carbon, 10% oxygen in compounds other than water. Of the group of elements normally thought of as having nutrient value there will be approximately 2% nitrogen and 2% ash made up of minerals. The latter after all is the only fraction of plant tissue actually obtained from the mineral particles of the soil.

As decomposition of the leaves commences in the soil the first materials to be attacked by the bacteria are the starches and sugars which they need for their existance. Then they go after the proteins which they need to increase their kind by cell growth and division. Some of the protein escapes the bacteria to combine quickly with the lignin from woody tissue to form humus.

As much of the nitrogen, phosphorus and potash is used up by the bacteria in this process of decomposition, we must add fertilizer containing these elements to our compost heap to keep the balance.

Peat moss and similar forms of organic matter are practically all cellulose and lignin. There is little to sustain the activity of bacteria and fungi, which must therefore obtain starch, sugar, nitrogen, phosphorus, etc. from the soil to bring about decomposition of these raw materials. This may cause starvation of plants for nitrogen particularly. Therefore the addition of a good amount of general purpose fertilizer is even more important with peat than with leaf mould.

Cellulose which forms much of the structural fibre of the plant tissues, resists decay more than do starches, sugars and proteins, but is broken down more quickly than fats, waxes and lignin. The breakdown of cellulose is brought about by two groups of bacteria which require air and prefer an alkaline environment. The by-products of their activity are hydrogen, carbon dioxide and marsh gas (methane). These by-products create acid in the compost which would hamper the aerobic bacteria and leave the field open to other anaerobic groups which cause putrifaction and excess formation of

nitrites which have a toxic effect on plants. This is the reason for the addition of lime to the compost heap or manured land "to keep it sweet" and encourage bacterial action.

By the time our leaves have gone through the process of decay, they have not directly contributed a great deal of actual nutrient value to the roses. Along with all the other decomposed organic matter, however, they have been the means of stirring up a great deal of chemical activity in the soil. Without this organic matter and its content of living organisms, the soil would be as inactive as an automobile without an engine.

Leaf Analysis

A New Diagnostic Tool

J. A. Archibald

Horticultural Experiment Station
Vineland Station, Ontario

ARE your roses well fed and happy, or do they suffer from "tired blood"? Is their "diet" properly balanced? Are they too vigorous, or do they resemble a "97 pound weakling"? Absurd? Perhaps, but do you realize that plants require at least 12 elements, in addition to carbon, hydrogen, and oxygen, for normal development? A properly balanced supply of these essential elements is just as important to the plant as an adequate diet is to you.

Since the earliest days of our civilization, man has concerned himself with trying to understand the processes of nature. Since the struggle for survival was closely tied to the struggle for food, it is only natural that processes of plant growth have interested him greatly. However, until the middle nineteenth century, all theories of plant growth and nutrition lacked experimental backing. Most of them hold little truth in our present state of knowledge. Similarly, our present concepts may appear limited or in error 100 years hence.

Field experiments, the first step in the study of plant nutrient requirements, were first initiated in 1834, and expanded rapidly following that time. We now have to rely less and less on unfounded theory, due to the increasing fund of experimental data.

The differences in crop performance observed as a result of various manual treatments aroused interest in finding a means of measuring the factors responsible for differences in plant performance. Unfortunately, early analysis of plant and soil was of little value, due to lack of knowledge of essential elements, and unsatisfactory methods of analysis.

In addition to the field experiments mentioned above, there are three other methods which should be considered. These are visual symptoms of deficiency, soil tests, and leaf analysis.

Visual deficiency symptoms are of value in determining the nitrogen status of plants. If growth is poor and foliage pale, nitrogen deficiency may be responsible. However, for the mineral elements, visual symptoms do not normally appear until the deficiency is well advanced. Unfortunately, loss in growth and yield may occur while the tree is in the "hidden deficiency" stage, long before symptoms of deficiency can be seen. Thus, visual deficiency symptoms are not a satisfactory guide for mineral fertilizer requirements.

Soil tests have been used as an aid in determining the nutrient requirements of crops for many years. For annual crops, and for a number of perennial crops, soil tests, properly calibrated for specific soil and crop, are a very satisfactory means of determining these requirements. Some rose growers have made use of the Soil Testing Service offered by the Ontario Department of Agriculture. However, soil tests have not been completely satisfactory for determining the plant food needs of deep rooted, long-lived crops such as fruit trees. This is not the fault of the soil test. Because of the large root system, varying in extent from site to site, it is difficult to adequately sample the root area. Too, many factors other than soil nutrient levels influence the nutrition of such crops. Soil drainage and texture, plant rootstock, variety, pruning program, and other variables may influence the nutrient requirements of plant. Levels of nutrients in the soil do not reflect the effect of these factors on the plant.

At present, leaf analysis is the most accurate means available for determining the plant-food requirements of such plants. It has been shown by many researchers working with fruit trees that it is possible to correlate tree response with leaf composition to a degree never obtained with soil tests. Similar findings would be expected for other perennial crops such as the rose. While the soil test may tell us what is in the soil, and therefore what the plant should be able to get, leaf analysis tells us what it actually is getting.

The leaf may be considered the most important part of the plant. It collects the various nutrients and combines them for redistribution. If any one of the essential elements is not available, leaf functions are impaired, and plant performance suffers. Leaf analysis results, properly interpreted, should indicate the ability of a plant to grow and produce.

Before we get too enthusiastic about leaf analysis we must consider its limitations.

First, time and place of sampling are important. Nutrient levels in the leaf vary from early to late season, and from one part of the plant to another. Nitrogen and potassium levels, for example, normally drop during the growing season. Newer leaves contain more of these two nutrients than do older ones. Both these factors must be standardized for consistent results. Weather conditions may temporarily disturb the nutrient balance in the plant, and must be considered in interpreting results.

Varietal differences in composition occur. For this reason, basic information regarding optimum nutrient levels in the leaf must be obtained. Research work, costly and time-consuming, is necessary to establish these levels.

The cost of carrying out leaf analyses is much higher than for rapid soil tests. Ash extraction procedures are involved. In this process, the leaves are dried, ground, and ashed in a muffle furnace until a white ash is produced. It is then dissolved in an acid solution. This solution is used for the determination of the mineral elements. Fully quantitative methods of chemical and instrumental analyses are used, involving the use of costly equipment. A conservative estimate of the cost would be $20 per sample.

Finally, the procedure is slow. Since samples must be taken at a definite time during the growing season, the work cannot be spread over the whole year if results are desired sooner. A leaf-analysis service cannot efficiently operate as speedily as can a soil-test service. This is a particular disadvantage where a nutritional disorder is suspected, and a rapid remedy required.

What is the current status of leaf analysis as a diagnostic tool in Ontario? Following several years of intensive research to gather the

necessary basic information, a Leaf Analysis Service was established in 1958 by the Ontario Department of Agriculture at the Horticultural Experiment Station, Vineland Station, for apples, peaches and grapes. In 1961, pears and sour cherries were added to the list, following three years of further study with these crops. There are no immediate plans for adding further crops, although research work using leaf analysis as a measure of nutrient sufficiency is underway with several additional fruit and vegetable crops.

Following are the mechanics of operation of the present Leaf Analysis Service. Growers wishing to make use of it make application to their local Fruit and Vegetable Extension Specialist. The samples, and the fee of five dollars per sample, are collected by the extension specialist. Fruit-tree samples are collected in mid-July, and grape samples in early September. Samples are forwarded to Vineland for analysis and recommendations. Reports are sent to participating growers by the end of December, thus allowing them to take advantage of winter fertilizer discounts, and to plan the nutritional program for their orchards and vineyards for the coming year.

Would such a service be of value to rose growers? It well could be, but it would be several years after a suitable research program were initiated before sufficient information could be obtained to offer a service. In the meantime the limitations of soil tests listed for fruit trees may not be as serious for roses. The fact that soil samples can be taken during the whole growing season, and the lesser cost and time involved in having soil samples analyzed, makes soil testing advisable at present. Many rose growers are not taking advantage of the free Soil Testing Service available to them, through the Department of Soil Science, Ontario Agricultural College, Guelph. For crops where soil test results have not been satisfactory, the limitations of leaf analysis are more than offset by the much greater dependability of the results obtained.

Should Gardens Have Their Soil Tested

T. J. Heeg,

Associate Professor, Department of Soil Science,
Ontario Agricultural College, Guelph, Ontario

BEFORE attempting to answer the often repeated question, asked in the title above, let us look at some of the reasons for soil testing, and some alternatives which could be used instead of soil testing. First and foremost let it be known that a soil test can do only one thing — it measures the fertility levels in the soil which in turn indicate the need for limestone of the proper kind and amount, and the need for fertilizer of the proper kind and amount.

There are many things a soil test cannot do. Contrary to what many people think, it cannot determine the value of the land. A soil sample coming to the laboratory arrives in a neat little box. The analyst does not know if the field or garden is stoney, how deep the soil is over bedrock, or if there is an impervious layer of hardpan just below the surface soil, or any number of physical factors which might prove hopeless for good plant growth.

It is obvious that a soil test cannot correct unsatisfactory yields caused by unfavorable weather, disease, insects, poor drainage, excessive drainage, poor physical condition, poor cultural practices, poor seed or low quality plants.

These things are pointed out so that no one could possibly assume that the soil test is the final answer to why growth is inadequate. This is the reason why we emphasize that the soil test can only give recommendations for limestone and fertilizer of the proper kind and amount. If all other factors are properly taken care of, growth should be improved by following the recommendations from a soil test.

WHERE TESTING BENEFITS MOST

Soil testing is of greatest economical value when applied on a commercial basis — a farm or commercial greenhouse. In these cases the production of crops must be done as economically as possible. The right fertilizer in the right amount saves the farmer or greenhouse operator hundreds or even thousands of dollars, depending upon his acreage and the crops he grows. Much research has been done in Ontario and elsewhere to correlate soil test values and crop response to fertilizer and limestone use. Of necessity most of this research has been on field crops such as oats, corn, wheat, potatoes, hay and pasture, tomatoes, etc. Little if any correlation has been made between soil test values and the response of fertilizers to garden flowers and shrubs. This in itself limits the usefulness of soil testing for home gardens.

During the great depression of 1930-1940, the emphasis was on economy in industry and government. Non-essential items were drastically cut. I heard one speaker say, "Roses! You can't eat roses." This could point-up the fact that home gardening is not an economic unit in itself — especially flowers and shrubs. Yet what a drab country this would be without gardens or landscaping! It is difficult to place an economic value on beauty and it is difficult to assess the value of recreation, exercise and pleasure in gardening. Despite these facts, you can see why practically all research on soil testing has been directed to food crops. They are an important part of our economy. We must help the growers to produce food cheaply and with profit to themselves.

SOIL SAMPLES TESTED IN ONTARIO

There are some seventy thousand farmers in Ontario. In 1960, the soil testing laboratories of the Ontario Agricultural College analyzed and reported on about 50,000 soil samples — 35,000 from farms and 11,000 from greenhouses. The remaining 4,000 came from home gardeners. There are many times more gardeners than farmers in Ontario and if even one quarter of them sent us soil samples we would be faced with about 100,000 garden soil tests.

WHEN GARDENS SHOULD BE SAMPLED

In summary of the above one can, therefore, say that because home gardening does not represent an economic unit, research on

the application of soil testing has been directed to commercial crops. The value of an interpretation of the soil test to the home garden is reduced because of this lack of information. In view of this, I would not recommend an all-out program of soil testing for home gardens. However, if a gardener is having serious problems in growing plants, and if there is no apparent reason for it in physical factors, then a soil test might help and I would recommend it. A soil test in such a case might reveal that the gardener's fertility levels are too low. Or it could be that the garden has been over-fertilized — too much fertilizer is deadly to plants. It is also possible that there is a serious imbalance such as adequate nitrogen, very low phosphate and high amounts of potash. Soil testing would show any of these complications. However, if you are now getting good growth, there is no point in soil testing — your program must be good.

INFORMATION FOR BEGINNERS

How does the new gardener know what to do? There are many of these each year. I would advise him first of all to obtain literature from his provincial department of agriculture. In Ontario this would be the Ontario Department of Agriculture and specifically from the Department of Horticulture, Ontario Agricultural College, Guelph. In his letter he should state the type of plants he wishes to grow — annual or perennial flowers, roses, shrubs, evergreens or vegetables — and what kinds — lettuce, corn, potatoes, etc. A wealth of information is available at no cost. If you address a note to the author of this paper asking for information on the properties of soils and use of fertilizers for home gardens, I shall be glad to send you my "Soils and Fertilizers for Home Gardens". Good general recommendations can be made and are usually an adequate alternative to soil testing in the case of gardeners.

These general recommendations can be made quickly — often by return mail. Soil test recommendations require a minimum of two weeks. In busy periods such as September to December a reply might take 6-8 weeks and in the spring 3-4 weeks. Good soil tests require time and often a reply arrives too late for the gardener. However, where a soil test is urgent — when a grower is in serious trouble and must correct his trouble immediately, a report is made as quickly as possible.

ABOUT SAMPLING AND RECOMMENDATIONS

If your home garden is not thriving as it should and if there is no apparent reason for it, you may want to send a soil sample. Official containers for samples are available from any agricultural representative or by writing to Department of Soil Science, Ontario Agricultural College, Guelph, Ontario. We will also supply you with an information sheet and instructions for sampling. Follow these instructions carefully because a soil test recommendation cannot be any better than the sample sent to us. If this sample is badly taken and does not adequately represent the garden our recommendation to you could be very wrong indeed.

After a garden sample is tested the results of the analysis go to one with a specialist's knowledge of the plants concerned. The specialist considers the analysis and the information supplied in a letter or on the "information sheet", before making his recommendations. Be sure that the information you supply with the sample, adequately states the troubles you are having, because this greatly assists any interpretation of the soil test data.

SUMMARY

From this article, it is hoped that you as a gardener will understand why we cannot promote wide-spread soil testing on garden samples. It could become a physical impossibility unless extensive public funds were provided, in which case your taxes would go up. In the great majority of cases, a general recommendation can be made which would provide just as good growth as a soil test recommendation at considerably less money. In those few cases where troubles arise with no apparent reason a soil test is definitely recommended.

'ORANGE SENSATION' (floribunda)
Fashion seedling
Raised by G. De Ruiter, Holland
TRIAL GROUND CERTIFICATE AND CERTIFICATE OF MERIT, 1960
Reproduced by kind permission of the National Rose Society of Great Britain

The Weather and Plant Disease

W. G. Kemp

Research Branch, Canada Department of Agriculture
St. Catharines, Ontario

BOTH experiment and observation demonstrate that weather and other environmental conditions have an important influence on the occurrence and severity of infectious plant disease. In earlier times, many diseases were attributed solely to the weather. This erroneous belief still exists in the minds of some people today. The weather certainly is not the cause of disease but rather a factor contributing to it. Plant disease results from the reciprocal interaction of a susceptible plant (host), an adaptable parasitic agent (pathogen), and the numerous factors of a largely unpredictable environment. These factors act collectively and simultaneously and the action of any individual factor is qualified by others.

Weather is part of the environment and is generally understood to include light, temperature, rain, atmospheric humidity, wind, evaporation, and atmospheric pressure. It may be defined as the average succession of these elements over a short period of time. It is not to be confused with climate, which is a composite of the varying day-to-day changes of these elements. All of these factors influence diseases in some way but moisture and temperature generally are the limiting factors. Frequently it is difficult to interpret what factor is finally effective, and to distinguish between the direct and indirect effects of the weather elements on host and pathogen. To understand the parasitic relationship better, a brief analysis of certain components of the weather and their effects on the pathogen as well as on the host may be useful.

WEATHER AND THE PATHOGEN

A disease and the pathogen that initiates it pass through a series of stages of development: the *inoculation stage,* in which the

infectious agent (spore) is transferred from its point of production to a host plant; the *incubation stage,* during which the causal agent germinates and penetrates its host; the *infection stage,* during which the pathogen develops on the host after its incubation; and the *sporulation stage,* in which the reproductive units of the pathogen are produced.

During each of these stages, the pathogen is at the mercy of the weather. Different pathogens often have different weather requirements at the same stage of disease development and the same pathogen frequently will have markedly different requirements at different stages of disease development. Obviously the effects of weather on the pathogen and the subsequent disease are so complex that they can only be suggested here.

Moisture and the pathogen — Moisture, with its daily and seasonal distribution, plays a major role in plant disease. Spore germination and the early stages of development of most pathogens are closely associated with moisture. The requirements of pathogens, particularly foliage ones that cause leaf spots, rust, and powdery mildew, fit broadly in one of four types based on high or low moisture, with some intergrading forms. It should be understood that pathogens with high moisture requirements during specific stages of their development will be successful only under conditions of high moisture. On the other hand, it should be understood that those that are grouped as pathogens with low moisture requirements can develop at low moisture levels but that low moisture is not essential for the process. Pathogens that are grouped in the first of these categories require high moisture during inoculation, incubation, and sporulation but not during infection. Spores of the pathogens of this group usually are released and spread by water, especially splashing rain. Many of the pathogens responsible for the anthracnose and leaf spot diseases are members of this group. Several, if not most of the bacterial pathogens of leaves also are of this group.

The moisture requirements of the second type of foliage pathogen include some of the downy mildew fungi. They need less moisture during the inoculation and infection stages but more during the incubation and sporulation stages of disease development. However, the pathogen requires less moisture during sporulation than it does during incubation.

The rust disease pathogens constitute the third group which can be delimited on the basis of its moisture requirements. Members of this group need high moisture only during the incubation stage.

The fourth type of pathogen does not require high moisture levels at any time for its development. The powdery mildew fungi and the viruses are examples of disease-producing agents that are in this group. Actually, free water has a deleterious action during the inoculation and incubation phases of the powdery mildew pathogens. Viruses develop normally under dry conditions. Whereas viruses do not sporulate, new virus units can form in the host cells under dry conditions.

In summary, most foliage pathogens except those responsible for powdery mildew and virus infections are assumed to need high atmospheric humidity or free water during incubation, but they do not require high moisture during infection. Thus, distinctions between these four types are found chiefly in their moisture requirements during inoculation and sporulation.

A similar situation, though possibly not as apparent, exists with the soil-borne pathogens that attack the roots of plants. They, too, need various amounts of moisture to effect their normal development. However, too much moisture in soils can be injurious to pathogens because it stifles them and often favours saprophytic competition. On the other hand, a soil that lacks sufficient water retards or even prevents germination of the spores of the pathogen.

Temperature and the Pathogen — External temperature, though much less important to the pathogen and the subsequent disease than the moisture factor, influences many of the stages in the development of the pathogen. In relation to the ultimate disease of a host, it is important in two ways: in its effect on the success of spore germination; and in its effect on the rapidity of the germination. Actually, the effect of temperature on the success of germination is highly variable, as might be expected. Some are little effected by temperature and germination proceeds over a very wide range, whereas, with others, such as *Sphaerotheca pannosa*, the fungous pathogen responsible for powdery mildew of roses, germination is closely related to air temperatuer with a distinct peak at about 70°F. Generally, few spores germinate at from 34° to

36°F. and 86° to 97°F.; their optima usually lie in the range 59° to 77°F. The rapidity of spore germination of most pathogens is associated with the external temperature and the optimum again differs characteristically with the pathogen involved. It is evident that temperature has a conditioning effect on the incubation stage of many pathogens, retarding germination on the one hand and accelerating it on the other.

Light and the Pathogen — There is some evidence that light inhibits the initial formation of spores but seems to favour their later development and maturation. The notable exceptions to this rule are the powdery mildew pathogens; they release larger numbers of spores and these in turn germinate more readily if they have developed in intense sunlight rather than under dull conditions.

Wind and the Pathogen — Wind has a direct effect on the pathogen only in the inoculation stage. It is of primary importance in the dissemination of the spores of many pathogens. On the other hand, wind may indirectly affect the pathogen in the incubation stage by decreasing the moisture on the surface of leaves, thereby inhibiting spore germination.

Should all of the weather elements necessary to a pathogen for its development appear together, still yet another disease conditioning factor must be taken into account — time. Favourable weather conditions obviously must last for some time to permit the complete development of a disease, though time requirements, as usual, vary from pathogen to pathogen.

WEATHER AND THE HOST PLANT

The inherent susceptibility of many plants to disease is not usually constant but rather fluctuates in a definite range. Weather factors may alter the susceptibility of a plant, increasing or decreasing its tolerance to attack in this specific range. Once again, as with the weather-pathogen relationship, changes in one factor seldom occur without inducing subsidiary changes in the others and a discussion of certain of these operative factors may be helpful in understanding the more complex situation.

Temperature and the Host — A plant has no body temperature of its own and assumes that of the environment. Therefore, one

expects temperature to affect the resistance of a plant to attack. Temperature may do this simply by lengthening or shortening certain developmental stages of a plant that are susceptible to infection. Studies have shown that at low temperatures in some plants and at high temperatures in others, the cell walls remain for a considerable time in a condition easily penetrated by pathogens. Should the temperature conditions in each case be reversed the cell walls rapidly thicken so that they are less readily penetrated by the pathogen. In this case, the influence of temperature on disease is through the host.

Moisture and the Host — Moisture relations, that are particularly important to the pathogen in its development may also modify the susceptibility of a plant to infection. Its influence may be exerted by way of the water content of the host, which may affect the penetration of the pathogen through the surface of the leaf, stem, or root or its subsequent growth in the tissues of the host. Flaccid leaves of some plants hinder infection by some pathogens. On the other hand, a plant such as a rose that is commonly affected by powdery mildew is relatively resistant to attack provided the young green parts are fully turgid. When rose leaf tissues lose turgidity, as happens in hot or dry air, they are more readily affected.

Sometimes soil moisture alters the susceptibility of a plant to infection. Generally, the correlation between increased soil moisture and heightened susceptibility is not yet too clear. Root-rot diseases might be expected to be more severe in moist rather than dry soils because water favours spore germination. This is not always the case however, because higher soil moisture sometimes favours development of the host more than of the pathogen. In still other cases, high soil moisture increases the severity of certain foot-rots of some plants, however the infected plants survive because they produce replacement roots more easily under these conditions, thus balancing the increased attack.

Light and the Host — Light, with few exceptions, affects the plant more than it does the pathogen. The complicated process by which green plants manufacture organic substances from water and carbon dioxide proceeds only in light. Certain of these substances are foods, others are the important structural components of cell walls of plants, and still others are probably part of the basic sub-

stance of which all living matter is made. Thus, it is understandable that light sometimes modifies the host before and during the course of infection. Lack of light tends to make the host more susceptible to some pathogens and more resistant to others. This contradiction suggests that the influence of light on the susceptibility of a plant to a disease cannot be explained in all cases as a mere matter of changes in food manufacture. As with the other weather factors, light can and does influence the plant differently at different stages of its development. For example, certain plants that beyond the seedling stage appear resistant to the rust pathogens under normal sunlight, become as susceptible as the seedling stage when shaded.

From this brief scrutiny of the separate influences of certain of the weather elements on pathogens and plants, it should be apparent that the sudden and destructive development of a plant disease is indeed a complex process. It is almost impossible to designate a single group of weather conditions as the optimum for the destructive development of any disease. Disease usually follows when the pattern of weather fluctuates between the optimum for the pathogen and the optimum for the host. In nature this pattern perhaps closely resembles the climate that prevails in the region where the disease is native.

On the other hand, one can sometimes characterize the weather of an area or a season in which a specific disease will be either severe or unimportant. Disease forecasting, though it has not been accomplished easily and is still in its infancy as a science, has become a reality in certain crops. From such forecasts, based on an understanding of the plant, the pathogen, and of their interactions in a variable environment, spray warning services have developed. To those who are interested in the effective and economic control of diseases, the advantages of such a service should be obvious. A few well-timed spray applications would be better and cheaper than many haphazard ones.

Newer Hybrid Tea Roses in Great Britain

Leonard Hollis, East Horsley, England

IT is well-known that roses are often variable in performance in districts no great distance apart. How much greater, then, is the scope for differences in behaviour as between countries with contrasting climates! Many examples can be quoted of varieties having had remarkable successes in Canada and the U.S.A. but proving failures in the United Kingdom and vice versa. Despite this drawback it occurs to me that Canadian readers may be interested in the experiences recorded in this article, even if they cannot be applied too literally to their own conditions.

During 1961 I have been fortunate in trying out in advance quite a number of hybrid tea and floribunda rose novelties, many of which will be available here for the first time only in the autumn of 1961. Most of these I have grown for one season only, either as maidens of my own budding or as young plants received from the raisers or distributors. Inasmuch as more than one season's experience is usually necessary to form an accurate assessment of a new variety my comments at this stage, which I am confining to the newer hybrid teas, are provisional only.

The 1961 season, in this part of the United Kingdom, was characterized by unusually severe frosts at the end of May which ruined most of my first crop of roses and blackened all the dahlias and other tender plants to ground level. Apart from this the summer has been warm and sunny throughout June and July, with prolonged dry spells, succeeded by a variable August, with gales, and a much warmer than average September, with temperatures in the seventies for much of the time and over eighty degrees on a number of days. Diseases such as black spot and mildew have been very troublesome, complaints about them being widespread.

Mr. C. W. Gregory's seedling, 'Wendy Cussons', has been outstanding in my garden for the past three seasons. It was awarded the National Rose Society President's International Trophy as the best new seedling of 1959 and the N.R.S. Gold medal and I have difficulty in faulting it. The colour, a sparkling cerise, may not be everyone's favourite, but each flower is perfectly formed with elegant, shell-shaped petals and deliciously fragrant with the true "old-fashioned" damask rose scent. Growth is strong and branching with abundant glossy, reddish green foliage which so far has been highly resistant to disease. The winner of the above trophy for 1960 and the National Rose Society Gold Medal was 'Super Star', and few novelties have received such a build-up, apart from 'Perfecta'. As a colour, of course, it is unique in a pure vermilion without shading, which does not seem to scorch or fade in strong sunshine and is retained until petal fall. Growth is fairly tall, with many buds on a stem, each on a fairly long footstalk and if these are allowed to develop, small flowers will result, little bigger than those of 'Spartan'. Disbudding results in medium-sized flowers of immaculate form, lasting a long time on the plant. I have been surprised how long some of them have retained their form as it is not a very full-petalled rose. My plants have been quite free of disease this season and I have budded more stocks for next season.

The 1961 winner of the President's International Trophy and the National Rose Society Gold Medal was 'Mischief', raised by Sam McGredy, an excellent profuse-flowering variety in my garden. Growth is very strong and branching, yielding plenty of new basal shoots quite early in the season. The dense foliage is a rich glossy green, healthy and abundant. The flowers are medium-sized, very nicely formed until three-quarters expanded, opening out flat in the final stages. As a colour it will appeal strongly to nearly everybody — a lovely soft orange salmon, about half-way between the shades of 'Fashion' and 'Spartan' respectively. It makes a really striking cut flower and is just about the right size for light, decorative arrangements, with a well-finished appearance. A point which has impressed me particularly is that although the varieties planted on either side of it were defoliated by black spot, my six plants of 'Mischief' showed no trace of the disease.

'Golden Giant' won its National Rose Society Gold Medal in 1960 and I must admit that when I saw it staged for award I thought it really was outstanding. Since then, with a season's experience behind me, I would describe it as a useful, tall-growing yellow rose for borders rather than for formal beds. My plants have suffered from mildew, but not black spot. It seems rather an untidy grower, bearing large clusters of buds at the extremities of long slender canes. Disbudding is necessary to produce a typical flower, when it will develop with good size and well-pointed form. The colour is a rich golden yellow in the heart, paling noticeably towards the petal edges to little more than cream. With light pruning this should make a large specimen bush, but it lacks the colour intensity of 'Buccaneer', 'Marcelle Gret', 'Lydia' and 'Spek's Yellow'.

'Westminster', from Herbert Robinson, besides its Gold Medal, won the National Rose Society Clay Challenge Vase for 1961 as the best new scented seedling from a British raiser. This cherry red and gold bicolour has done well with me and it is a lusty grower with large, glossy foliage and stout, upright stems. While not so vivid as the vermilion and gold bicolours such as 'Tzigane', it has a larger flower than most, of shapely form in the earlier stages opening loosely. The fragrance is very pronounced and quite exceptional for a rose of this type and the long petals comprise a flower of good depth. I took a fancy to this rose when I noted it in the National Rose Society Trial Ground three or four years ago and have had no reason to change my views.

'Stella' won its Gold Medal in 1960, and I will not forget in a hurry the magnificent blooms which Wheatcroft Bros. staged at the National Rose Society Provincial Show at Leeds. It is in the heavy-weight class, ideal for the exhibitor but an excellent garden rose too. I have four delightful blooms in front of me as I write these notes (October), all growing on the same stem. It is full-petalled, massive and slightly globular in form after the style of 'Eden Rose', creamy white with a suggestion of buff in the heart, intensifying to rich pink in the outer petals, flushed and edged carmine. The flowers are long-lasting and carried erect on firm stems, well clothed with thick, glossy foliage. There is very little perfume, unfortunately, but it seems well endowed with all the other qualities and I for one

will look forward to cutting excellent blooms from my plants for many years to come.

The slightly globular, very ful-petalled formation is also found in 'Lady Zia', a bright turkey red seedling from 'Peace' x 'Independence (Sondermeldung) noticeably paler in the heart. It has the rare virtue of a sweet fragrance in a rose of such brilliant colour and the glistening, reddish foliage provides a perfect setting for the blooms. Growth is sturdy and branching and although some of the flowers have developed with split centres I have had many of good quality. I find the bud shape, which resembles that of 'Gordon Eddie', less attractive than the long-pointed form, but this is really a matter of personal preference. It was raised by Bertram Park and won its Gold Medal in 1959. Another Gold Medal winner of the same vintage is 'Elsa Arnot', a sweetly scented bicolour variety of more refined colouring than most. The groundwork is a pale gold, heavily washed and shaded cerise and pink on the inside of the petals. Growth is vigorous, with plenty of glossy green foliage which may attract some mildew late in the season. I tried the experiment of potting up some dormant budded rugosa stocks of this rose last year and flowering them in a heated greenhouse in April. They did very well and bloomed again almost as well as the maidens left in their budding rows later in the summer and in the autumn. Strangely enough this rose retained its form longer under glass than in the garden, where it "blows" rather quickly.

'Dorothy Peach' is the last of the Gold Medal winners I would like to mention. A seedling from 'Peace' x 'Lydia', it seems to have inherited its full-petalled, well-formed flowers from the former, but the colour is closer to a self yellow, with less of the pink margins and suffusions to the petals characteristic of 'Peace'. The habit of growth is more compact and branching and therefore more suitable for smaller beds and so far it seems to be more profuse with its flowers, with fewer blind shoots. Altogether it seems well up to Mr. Herbert Robinson's standard.

'Piccadilly' has won many international awards in European Trials, as well as the Certificate of Merit of the National Rose Society. The half-open flowers, of medium size, are quite dazzling with their inner face of vermilion, shading to yellow at the base, with a reverse of buttercup yellow. As the flowers age the vermilion and yellow

become intermingled and quite fascinating. They open fairly quickly and show their lack of petals in the later stages, but are borne with great freedom on upright plants, with extremely decorative varnished foliage, crimson when young. At the half-open stage I think this is the most attractive of all the bicolours and a healthy grower.

Another Certificate of Merit winner of 1959 is 'Ideal Home' which has given me tall, well-branched maiden plants of upright habit, with reddish wood and young foliage. The flowers are only of medium size, well pointed in the early stages and a pleasing blend of pink and ivory, with a silvery reverse and sweetly fragrant. As the flowers mature the pink intensifies to dark red and stays like this for some time before the petals fall, the expanded flower having the characteristic floribunda form at this stage. I like the young flowers but do not find the older ones attractive. My plants have shown no trace of disease.

'Garvey' is another rose of sound constitution — not very glamorous, but of garden merit. Growth is exceptionally strong and thorny, carrying the full, rather globular blooms with the greatest freedom. The colour is a blend of two shades of pink — rosy salmon and a softer, peach pink, and unless disbudded, the flowers will appear in large clusters. There is little scent and split centres are quite common. My plants developed black spot, but so many varieties were infected that I would not attach much importance to this attack. 'Miss Ireland' is a rose of entirely different type — glamorous, gaily-coloured and as dainty as one could desire. The colouring is perhaps the most novel feature — a rich orange-salmon, almost a tangerine, with a reverse of pale orange or peach and fading with age. The medium-sized flowers are attractively formed but rather thin, and carried on long, wiry stems, with reddish wood and young foliage. It seems susceptible to both black spot and mildew in my garden and my preliminary impression is that it may not have as strong a constitution as most. I hope I am proved wrong in this as it is a delightful rose for decorative work.

'Lucy Cramphorn' is proving an extremely valuable addition to the vermilion or geranium red roses. The colour is really intense and held right to the end, with none of the ugly mauve shades assumed in the final stages by such varieties as 'Soraya', 'Radar', 'Independence' and others of this type. The flowers are large, very

full and inclined to be globular, but generally well-formed, slightly fragrant and carried with great freedom on strong, upright growth. The foliage is very large, glossy and disease-resistant and altogether it has impressed me as an excellent variety for general garden display which has been outstanding late in the season. To be ultra-critical the neck is occasionally not quite adequate to support the heavy flowers, but it is by no means a "nodder".

Perhaps I expected too much from 'Gold Crown'. Coming from 'Peace' x 'Spek's Yellow', one is inclined to expect a super rose, but so far I cannot describe it in these terms. The growth is tall and upright, with stiffer stems than 'Spek's Yellow' and dark green, very glossy foliage. Unfortunately it has been niggardly with its flowers so far and what blooms there have been have developed with confused centres. I have seen it a good rich golden yellow elsewhere, but on my soil it has been noticeably paler, with a pink suffusion. It may do better as a cut-back, and I intend moving my plants to give them a cooler root run than their budding quarters.

Having seen the outsize specimens of 'Sabrina' exhibited by Wheatcroft Bros. Ltd. from time to time I was not surprised to find the largest blooms a little on the coarse side. Actually I was pleasantly surprised by some of the smaller flowers on my maiden plants which proved very attractive in the early stages, but soon lost their shape as they opened out. Although the general effect is of a bicolour, with carmine or crimson replacing the vermilion of the orthodox bicolour on the inner face, the reverse is not a self yellow but variable, with gold or silver, streaked or blended with carmine. The flowers are globular in shape, with plenty of petals and carried mostly singly on strong stems, with massive, reddish green foliage. I can detect very little scent.

The last of the Certificate of Merit winners is 'Memoriam', which many growers in Canada may already have grown. With me the flowers are palest blush, fading to white in the outer petals, with a slightly deeper flush in September. The large, full flowers are of immaculate form and finish, freely produced on strong, bushy growth with large, dark foliage providing a contrast. At its best it resembles a much larger 'Ophelia', without the amber base and without the honey fragrance of the older rose, but it must have fine weather. Very few flowers will open at all in the rain. This is

not a striking rose in the garden — its appeal lies in the perfection and finish of the individual flower, which will delight the exhibitor if he is prepared to protect with shades.

Two further hybrid teas which were awarded Trial Ground Certificates by the National Rose Society in 1958 are 'Dame de Coeur', from Belgium and 'Scandal' from France. Both have done very well in my garden for two seasons. The former is very much on the lines of 'Karl Herbst' and from the same parents ('Peace' x 'Independence') but is a shade lighter in colour, light red or a deep, rose madder, shaded scarlet and slightly paler on the reverse. It is an extra-vigorous grower and very free-flowering, but the form is rather looser than 'Karl Herbst', although I find it continues later in the season and is a much better wet weather rose than the older variety. The foliage is disease-resistant and abundant and it is a rose which anybody can grow. 'Scandal' also is a wonderful grower, and a very pleasing flower when half-open. The combination of rose pink, carmine and silver is really attractive, on similar lines to 'Perfecta' but the petal edges are often serrated, imparting a somewhat ragged appearance to the fully open bloom, which becomes a deeper colour with age. If cut in the early stages it will make a delightful vase and last for several days.

Two red novelties from France which have received some publicity are 'Christian Dior' and 'Champs Elysées'. Both have performed well in my garden during the past two years, but both fall well short of the ideal in red roses. The former is an extra-tall, upright grower, really too tall for formal beds, with large, beautifully-formed flowers of considerable length of petal, a rich scarlet velvet on the inside, the reverse being paler. It can be cut with exceptionally long stems, but is practically scentless and one of the worst modern roses for mildew. It also spots badly in wet weather. 'Champs Elysées', in striking contrast, has a rather short, branching habit, wtih low-centred flowers of a very rich scarlet or blood red, shaded velvety crimson. Again, there is virtually no scent but it holds its colour extremely well, is quite unaffected by rain and seems perfectly healthy.

Two novelties from Kriloff of France, which have received little or no publicity, but have done well with me in 1961 are 'Francine' and 'Fred Cramphorn'. The former is a very pretty bicolour, deep

crimson on the inside with a silvery-white reverse to each petal. The young flowers are of medium size, nicely pointed and sweetly fragrant, opening rather loosely. Essentially a decorative variety, it is particularly profuse and has a branching habit of growth with abundant, glossy green foliage, red in the early stages. I much prefer it to 'Grand Gala', which seems bulbous and blowsy by comparison and is not as good in wet weather. 'Fred Cramphorn' gave some wonderful flowers early in the season, with extra length of petal and exquisitely formed at the half-expanded stage, opening out flat. The buds are vermilion, changing to a warm rose-opal as the petals unfurl, somewhat on the same colour lines as 'Montezuma', but with serrated petals. The flowers are carried upright on stout stems and are pleasantly fragrant. This is a really floriferous garden rose with a vigorous habit.

'Sweet Cherry', from Alex. Dickson & Sons Ltd., Northern Ireland, is a cheerful garden rose in bright cherry pink, heavily shaded gold towards the base, somewhat on the same colour lines as 'Teenager', but a better quality flower of good form in the early stages, but hardly above medium size. It is free-flowering, but soon opens out flat and cool conditions would probably suit it best. The scent is sweet, but nothing like as rich as that of 'Teenager'. 'Valerie Boughey' is a sport from the well-known 'Tzigane' and identical in every respect except colour. This is a very rich orange cerise, shaded gold at the base of the petals and it seems to be well-fixed, as none of my plants has shown any sign of reversion. The colouring is reminiscent of the pre-war Spanish rose, 'Violinista Costa', but the flower is of better shape.

Finally there are two American introductions, 'Angel Wings' and 'Sterling Silver', which are probably much better known in Canada than here. 'Angel Wings' has been rather disappointing in its first season. The growth on my maiden plants, budded on seedling canina stocks, has been rather spindly and while the young flowers are nicely pointed and strongly scented, they open out much too thin and are none too numerous. The delicate pastel shades of ivory, flushed pink are too pale for a garden rose and there are far too few petals for exhibition. I much prefer 'La Jolla', which has a far better habit and seems superior in every respect except for scent. 'Sterling Silver' is undoubtedly the most shapely of the lavender

and lilac varieties, with a really exquisite fragrance. The flowers open quickly and a delightful, shapely young bloom will be blown in a couple of hours on a warm day. The growth is only moderate and the foliage is somewhat scanty and tends to mildew later in the season. It is probably most useful for growing under glass when one plant will scent a small greenhouse.

Rose Growing in Britain as Seen by a Canadian Visitor

Harold C. Cross, Baie d'Urfe, Que.

"SEEING is believing"! As his circle of knowledge and experience widens, the Canadian tyro rose grower soon learns of the wide popularity of the rose in Great Britain. He is impressed by reading that the National Rose Society now has 80,000 members. In a recent book on rose culture, the introduction written by W. E. Harkness, states: "Year by year the great Rose Shows are crowded, and the National Rose Society enrols new members by the thousand. In private gardens and in public places more and more roses are being planted. In short, roses are grown and loved by the people as never before." This claim was pleasantly corroborated by the observations of the writer while on a two months' visit to Great Britain and the Continent during the past summer.

Our first object was a family visit with a sister now residing in the beautifully situated city of Perth in Scotland. On the second day, we went for a short stroll in the immediate residential neighbourhood, and during a walk extending over seven or eight blocks, we saw literally hundreds of roses in the attractive front gardens maintained by the householders. On their narrow properties, each home was beautified by a colourful garden display, and while Dahlias and Gladioli were to be seen in large numbers, the Rose was obviously the favourite.

The experience was similar from Inverness in the north to Bexhill on the Sussex coast, whether seen from a motor car, or through the windows of train or bus, rose blooms were to be seen in gardens everywhere on the Island. Striking displays were created by climbers on walls and over doorways, we noticed a surprising proportion of tree roses, with hybrid teas and floribundas providing the bulk of

the bloom. It was quite apparent too, that landscaping authorities consider the rose a most effective planting material. Our first evidence of this was in Edinburgh, where thousands of roses are planted in the public gardens located along the length of Princes Street, which together with the picturesque, historic old Castle on its craggy heights, the National Art Galleries and other public buildings, and bounded by a line of attractive shops on the north side, constitute possibly the most beautiful, certainly the most unique, central area in the heart of any European city. Later we were to see rose beds at Stratford-upon-Avon, along the river near the Shakespeare Theatre, at Warwick, Windsor and many other towns.

While in Edinburgh, a rewarding visit was made to the Royal Botanic Gardens, easily reached by bus from the heart of the city. Of course we were particularly interested in the roses, and were disappointed to find that damp, humid weather had caused considerable mildew, less blackspot. At the end of August, the best blooms were found in the large beds of 'Fashion', 'Orange Triumph', 'Alain', 'Frensham', 'Elizabeth of York' and 'Peace'. We were impressed with a grouping of Penzance sweet briars, particularly an enormous bush of 'Amy Robsart' covered with deep pink bloom. Others which pleased were the hybrid musk 'Felicia', the hybrid tea 'Phyllis Gold' (an old rose but unknown to me), and a lovely bed of 'Poulsen's Yellow'. Here we saw 'New Dawn' grown effectively as a shrub, on a sloping bank, and several ramblers used similarly or treated as trailers, instead of as conventional climbers. One of these was 'Reveil Dijonnais', not often seen in Canada. A bed of 'Austrian Copper' provided a spectacular bicolour display.

It was in this garden that we were pleasantly surprised to see cultivated as a named herbaceous specimen, our good old friend the Canadian Golden Rod (sometimes a pest in my own garden), and dignified by the name 'Solidago Canadensis'.

We reached London on September first, and felt confident that there would still be sufficient bloom in the rose section of Kew Gardens to warrant a visit. This proved to be the case, at this great horticultural centre, which contains hundreds of acres, and deals with all phases of gardening, including much research work. Floral specimens from all parts of the world have been domesticated here, outdoors, and indoors in the many greenhouses.

In spite of the lateness of the season there were thousands of roses to be seen in full bloom, though many were about ready to fall. Unfortunately, some mildew and blackspot was in evidence. Two large beds of 'Peace' lived up to its reputation with a splendid display of bloom, and showed masses of buds promising a still further show to come. One of my personal favourites, 'Michel Meilland', seemed the most attractive bed of the lot. Other varieties which still presented a worth while display included: 'Grandmere Jenny', 'Elizabeth of York', 'Tiffany', 'Mojave' (an especially clean lot of plants), 'Rendezvous' (a beautiful pink quite new to me), 'Eden Rose', an old friend 'Jiminy Cricket', 'Konrad Adenauer' was a blaze of velvety crimson, 'Mary Wheatcroft', 'Beaute', a lovely bed of 'Crimson Glory' but unfortunately "blueing" rather badly, a stunning display of 'Soraya', while a large bed of the new 'Wendy Cussons' demonstrated that this newcomer is living up to expectations.

We were interested to see a large group of hybrid perpetual 'Hugh Dickson' with their massive branches pegged down, to encourage increased bloom. The crimson climber 'Honour Bright' was treated as a pillar — some plants at least ten feet in height, and also looped over and tied down to pegs.

Next day it was tremendously exciting to see Queen Mary's Rose Garden in Regent's Park, so well-known by reputation to rose lovers all over the world. Without question this is the most striking rose garden we had ever seen. The area is laid out in a comprehensive landscaping design which includes formal beds, curving paths, trellises and pillars, slopes and hedges, a large lake, and ample seating space for pure enjoyment of the beauty on display. In securing the delightful effect, hybrid teas, floribundas, hybrid perpetuals, shrub roses of all types, standards, climbers and ramblers, all are used.

Probably the most spectacular show was provided at the time of our visit by the large beds of 'Grand Gala', 'Helen Traubel', 'Peace', 'Buccanneer' (every bush over five feet in height), 'Mojave' (giant plants, a solid mass of bloom).

Beds of 'Gail Borden', 'Perfecta', 'Karl Herbst', 'Margaret', and many others had all passed their prime. The impression created by

a huge bed of the new 'Suspense' indicated the popularity which may be expected for this bicolor newcomer. The buttercup yellow colour mass of a bed of "Allgold' revealed why this new floribunda holds the top rating (National Rose Society) this year. Another attractive new floribunda 'Sweet Repose' seems to be very close in colour to 'Masquerade'. A complete stranger with an eye catching, unusual colour, was the golden orange 'Zambra'. 'Orangeade' (Gold Medal 1959) appealed, being another with the new unusual shade of bright orange. A large bed of deep cerise 'Wendy Cussons' gave evidence that this new rose is living up to its high promise.

In this garden there are a few smaller beds where certain hybrid tea varieties are massed in bush form, with standard (tree) plants of the same variety interspersed amongst them. This technique proved quite effective. The various tripods, arches, pillars and connecting rope chains, using climbers and ramblers, looped and trailing from post to post, suggested the great variety of methods which may be employed in the growing of such types. 'New Dawn', with its vigorous trailing habits, was particularly effective in some of these unusual arrangements. We saw several 'Golden Showers' treated as pillars, which grew straight up about twelve feet, with all the bloom clustered at the top — a habit of this climber.

As an overseas member of the National Rose Society I was anxious to see the new headquarters of the Society at St. Alban's, which may be conveniently reached by bus from London. We found the few hours spent on this trip well worth while, and in our humble opinion, the new property, which includes a substantial and dignified-looking brick residence used as headquarters office, library, etc., and the adjoining acreage, seems to offer excellent facilities for the programme of the National Rose Society in behalf of its members. Establishment of the new trial grounds and display gardens is well under way, many of the bushes from the old gardens having already been transplanted, and were a mass of bloom on our visit in September. We were especially impressed by the following newer varieties on display: 'Super Star', a brilliant vermilion, Gold Medalist for 1960, 'Fritz Thiedemann', vigorous, dark vermilion, 'Piccadilly', claimed by some to be the best of the new red and

yellows, 'Dorothy Peach', yellow flushed red, 'Pink Favourite', rose-pink, 'Lili Marlene', a crimson scarlet of bushy, erect habit.

The climax of our rose travels was the National Rose Society Autumn Show, held in the Royal Horticultural Halls, Westminster, September 8 and 9. Through the kindness of the Society Secretary, I was supplied a Press ticket permitting my entrance to the Halls during the period when exhibitors were preparing and staging their specimens; and also a judge's badge, so that I might observe the judging while in progress.

As a visiting Canadian, I was tremendously interested in the elaborate preliminaries of the exhibitors: the use of camel hair brush for cleaning blooms; wiring specimens to make them stand upright; use of soft yarn to tie the centres of blooms to retard their opening; careful placing of plant material in vases to keep flower stems in position; "dressing" blooms by pressing petals over fingers. Regulation wooden boxes are used in classes for "roses shown in boxes", and specimens are placed in these, with stems in individual water tubes, and brought by the exhibitor to the show, ready to be placed on the bench in due course, with the box lid turned under.

We found it surprising that entries must be in eight days ahead of the show. The Divisions in the schedule are set for various sizes and locations of rose gardens: any size, not more than 500 trees, not more than 250; gardens in the Metropolitan area, those 100 miles or more from London. Incidentally, there are no classes whatever calling for single specimens, three is minimum required, up to 36. All exhibitors' preparations had to be ended at 10 a.m. sharp, then the judges went to work. They operated in panels of three, and I was fortunate in being associated with a panel during its work. Sufficient judges were available so that all judging was completed for the opening of the Show at 11 a.m., when the waiting crowd poured into the Hall.

I thought the four open classes: viz, one bowl of H.T. Decorative, 18 stems; one bowl Floribunda, 12 stems; six vases of H.T., a distinct variety in each, with 6 stems of each; and a box of 12 blooms, distinct varieties; provided the most gorgeous display of quality bloom which we had ever seen in a show. Among the prize winners we noted the following varieties appeared most often:

'Karl Herbst', 'Wendy Cussons', 'Super Star', 'Lady Zia', 'Christian Dior', 'Montezuma', 'Perfecta', 'Peace', 'Show Girl', Margaret', 'Diamond Jubilee', 'Symphonie', 'Pink Favourite', 'Orangeade', 'Masquerade', 'Sweet Repose', 'Anna Wheatcroft', 'Faust', 'Firecracker', 'Dearest'. A notable omission was 'Crimson Glory'; why, we were unable to discover. The best rose in the Show was a beautiful specimen of 'Montezuma'.

Amateur classes were staged in the smaller hall, the trade classes in the new Horticultural Hall across the street. When we entered this hall the view was almost overwhelming, thousands upon thousands of roses set out in elaborate and tasteful exhibits of all types and design, staged by the nurseries of Great Britain. We estimated there must be over a quarter of a million blooms on display. Gold Medals were awarded to 'Lilac Charm', a new floribunda of LeGrice, and to 'Dorothy Wheatcroft', another new floribunda of orient-red colouring. Considerable interest was shown in 'Vera Dalton', a new soft pink floribunda raised by Mr. A. Norman. So many people crowded around these attractive exhibits of named varieties that it was almost impossible to make progress in attempting to see them all. The nurseries had representatives present, with catalogues available, and thousands of orders must have been signed up.

During the afternoon the Society staged two showings of its excellent colour film on rose growing, in a smaller hall upstairs, after which Mr. J. L. Harkness, the Nurseryman, conducted a most interesting question and answer period. An information office was conveniently located to deal with the many visitors interested in National Rose Society membership.

The Show was the final item of a valuable experience which had been interesting, educational, stimulating and inspiring. We returned to Canada realizing how far many of us have yet to go in the finer points of rose growing, while conscious, of course, of considerable difference in the conditions which exist in our two countries, as these affect rose culture. There is much to learn about the rose on a visit to Great Britain.

Roses to Survive

A. Dick, B.Sc., M.D., Glasgow, Scotland

WITHOUT doubt the two best known and most widely grown roses of the post-war era are 'Peace' and the 'Queen Elizabeth' rose; these roses will, I am sure, be popular for many years to come. No rose is yet perfect and I doubt if ever it will; after all the work of the hybridiser must continue not cease! The number of new introductions from all parts of the world each year is now so great that I find it impossible to grow all new varieties. I am sure the beginner must be quite bewildered by the large number of varieties listed in the catalogues he receives.

After over 30 years of rose growing I can with some confidence decide at a fairly early stage of its life whether a new rose is likely to succeed in the battle of the survival of the best. Moreover, I am privileged to try many new varieties before their introduction. I think your readers might like to know which varieties have given the greatest satisfaction when grown in the West of Scotland. All the varieties I have selected are vigorous and disease resistant and should do well in Canada; these are the roses I predict will survive for many years to come.

THE BEST OF THE HYBRID TEAS

'Peace', now about 20 years old, needs little comment from me and as there is no substitute for it, no garden can afford to be without this grand bedding rose.

'Perfecta', a progeny of 'Peace' through 'Karl Herbst', I would select if permitted to grow only one variety. I can think of no other rose with such excellent upright growth, so beautiful green and red foliage and so resistant to disease which sends up so many basal growths each season. If we have a healthy plant then we may expect abundance of healthy blooms. 'Perfecta' produces such a profusion of perfect blooms, even in wet weather, that no rose

grower can do without it; the blooms last well when cut and the cream edged with pink colour is so useful for decorative arrangements. Perhaps the main disadvantage of 'Perfecta' is the roughness of the petals in the bud stage, however, this rose opens so beautifully that it is at present most exhibitors No. 1 choice.

'Super Star' is in my opinion the best garden rose introduced in the past ten years. The colour of orange-vermilion is entirely new in hybrid teas and a bed of this variety is truly arresting. Growth is vigorous and branching and blooms are always in evidence. After two years trial I have found it entirely resistant to disease. Individual blooms are large without being enormous and stand up fairly well to wet weather; unfortunately fragrance is not marked but this rose has certainly not reached the peak of its popularity.

And now for a British rose or should I be more accurate and say, an Irish rose, for which I predict a great future. I refer to 'Mischief', winner of the President's Trophy for the best seedling in 1961. This salmon pink ('Peace' x 'Spartan' seedling) produced sensational results in my garden during 1961. It is a vigorous healthy grower with abundance of beautiful blooms which are highly fragrant if perhaps lacking in petals. I am sure this rose will do well in Canada.

The silver and cerise 'Rose Gaujard' is perhaps the best rose we have had from the famous firm in Lyon. Apart from a tendency to split centres, which after all worries only the exhibitor, this is a long lasting and most useful decorative rose.

'Pink Favourite' is one of the best recent American hybrid teas. It is very hardy and possesses lovely bright green leathery foliage and abundance of blooms. Much disbudding may be required but apart from slight paucity of petals I can think of few faults.

'Stella', a recent German introduction, has performed remarkably well during the excessively wet season of 1961 in Scotland. The plant is healthy and upright, the blooms are large although slightly globular in shape. The colour is best described as a white or cream edged with cerise and while the centre may lack the height of 'Perfecta' this rose is a delight to the exhibitor owing to the wealth of petals which allow the blooms to open slowly.

For a really bright bi-colour I recommend the scarlet and gold 'Piccadilly'; the colour is not dissimilar to that of 'Tzigane' but is much more vigorous in growth and produces a great profusion of bloom.

The clear pink 'Ballet', a Karl Herbst seedling, from Kordes is another rose which was outstanding during our recent wet summer. It was always in bloom and while susceptible to black spot I feel it cannot be excluded on this ground in virtue of its other merits.

Finally for those who wish a really fragrant garden rose I must include 'Wendy Cussons'. I am sorry I cannot tell you this is a red variety, it is cerise! An excellent garden rose which will, when better known, become popular in Canada. You will note that I have just mentioned a red rose, but none appears on my list! 'Ena Harkness' and 'Josephine Bruce', both British introductions, are undoubtedly the best reds for general garden cultivation while 'Karl Herbst' and 'Brilliant' have been the outstanding exhibitors' reds during the past ten years. The newer 'Christian Dior' produces some lovely blooms but it is an untidy grower and very susceptible to mildew. I doubt if any of the above varieties will last another ten years so we must look to the hybridisers for some better reds.

THE BEST OF THE FLORIBUNDAS

'Queen Elizabeth', the best of our grandifloras is too well known to require further introduction. It is at its best when lightly pruned and is useful at the back of a rose border or as a hedge.

And now for two new roses about which you will probably know little. 'Paddy McGredy' is the most outstanding new floribunda rose I have ever seen. A single truss of this beautiful pink variety might contain over 20 large flowers each of perfect hybrid tea form in bloom at one time. The habit is excellent and the foliage clean. What a mass of colour to see a bed of this delightfully fragrant rose. Disbudded it can produce large exhibition blooms but surely the grower will want to obtain the wonderful profusion of colour when it grows naturally.

'Frensham' has for many years been the most popular red floribunda rose in Britain, but how unsightly it is with mildew in the autumn. I think it is likely to be succeeded by 'Evelyn Fison', a

McGredy introduction for 1962. This is not just another red floribunda. It is almost perfect, a wonderful grower, producing blooms of an arresting bright red well spaced on large trusses; for this rose I predict a great future.

'Iceberg' is the only white floribunda rose worth growing. Coming from Kordes one would expect it to be hardy and I prefer to regard it as a shrub rose. It has few faults apart from a slight tendency to mildew on the bud stems. Anyone wishing a white floribunda to bloom continuously in all weathers must select 'Iceberg'.

Now for a blaze of colour and in fact an ideal partner for 'Iceberg' I would select 'Orangeade'. This has been the brightest rose in my garden for over three years and I can see it retaining that position for some time yet. Perhaps the newer 'Orange Sensation' might be a rival in colour but 'Orangeade' has a more desirable habit of growth and is entirely disease resistant.

If you wish a tall, strong growing yellow floribunda rose then 'Faust' is an obvious choice. The blooms are of hybrid tea form and the ageing blooms, tinted pink, blend well with the 'Queen Elizabeth'. It is susceptible to mildew but has few other faults.

For a more compact yellow floribunda which retains its colour and whose petals fall cleanly I recommend 'All Gold'. Now over five years old this is still a most excellent bedding rose.

I have already mentioned that 'Iceberg' could be grown as a shrub rose. As an ideal partner I would commend the new 'Dorothy Wheatcroft' which blooms so continuously and produces enormous trusses of a beautiful orient red. This rose may not yet be known in Canada, but I think it will add brilliance to gardens for many years.

When I first saw 'Daily Sketch' I thought I was looking at an undisbudded 'Perfecta'. Yes, and without roughness of the outer petals. This just about sums up 'Daily Sketch', a grand bedding floribunda with healthy foliage and an excellent upright habit.

Finally another Gold Medal rose from Ireland. 'Dearest' raised by Alex. Dickson is a medium growing floribunda of a beautiful soft pink shade which is markedly fragrant. This in floribundas is

quite unusual and 'Dearest' is sure to be a great favourite with the ladies.

Space does not permit me to deal with other types, the climbers, miniatures and species roses nor can I tell you in this article how I cultivate my roses. There are so many excellent varieties to choose from that my task of selecting ten of the best hybrid teas and floribundas has certainly not been easy. Doubtless my selection will be different next year! However, I will be interested to learn in years to come how many of my selection have stood up to your severe winters and can rightly be called survivors of the fittest!

Winter Protection

Fred H. Rogalski

Editor — The Detroit Rose Society

PROPER winter protection for garden roses is essential to their care and growth. The Shrub roses and Species roses are the hardiest and need very little protection, apart from staking the canes to prevent damage from the strong winter winds. All other bush and climbing roses require a greater amount of protection.

Preparation for the winter protection of all types of roses should begin in the late summer. Plants should be sprayed for the control of disease until they are dormant. Foliage must remain on the plant, for it manufactures the sugar and starch which promotes the hardiness of the plant. Late or over-fertilization should be avoided — the new growth produced at this time will weaken the bush. Keep to a minimum cutting of blooms in the fall; excessive cutting is detrimental to plant health.

In my judgment, poor soil drainage is an important reason why so many bushes fail to survive the winter. Most of our rose beds are below grade level to prevent water run-off during the summer months. Rose beds of this type should have some means of proper drainage from heavy spring and fall rains and melting snow. Inadequate drainage can result in the accumulation of water around the root stock and/or canes and cause rotting. Many drainage problems can be solved by raising the level of the bed, laying drain tile or making a small trench leading to a lower part of the garden.

The most common method of winter protection is to hill the soil from eight to ten inches high around the base of each bush. Porous materials, such as corn cobs, saw dust and peat should not be used for they hold moisture, and if used, these materials will retain enough moisture during the winter to blacken and rot the canes.

It has been my experience that the following inexpensive methods provide adequate protection for healthy plants.

Hybrid Teas and Floribundas. . . . After the ground has frozen, fashion collars ten inches high and 30 inches long made of wire screen or building paper (with holes) forming them around the bush and filling in the collar with heavy clay loam. If collars are not available, mound up the soil as described above. It is also advisable to place marsh hay or discarded Christmas tree boughs between the mounds or collars in order to keep more growth on the bushes.

Climbers. . . . Place Christmas trees against those which grow along a wall or against the home. Those in the open should be detached from the trellis, laid on the ground and covered with marsh hay or discarded Christmas tree boughs.

Miniatures. . . . Remove the bottom from a large glass container (gallon size) and place over the bush. Mound the soil to within one inch of the containers top. This will help prevent the displacing of the plant by soil heaving.

Cuttings and Seedlings. . . . Because they have very little root structure, these too should be prepared for winter in the same manner as the miniatures. If the tops are too large for the containers, they should be cropped to size.

I have recommended the use of discarded Christmas trees and marsh hay for the protection of bushes. These materials will allow the air to circulate and also prevent quick thawing of the ground. These materials should be removed gradually early in the spring.

As a further suggestion, select only those bushes recommended for planting in your specific area.

The foregoing information, represents the steps I take to provide winter protection for the roses in my garden. It is my hope this article will assist you in the preservation of all the roses in your gardens.

The History and Lineage of Modern Roses

J. H. Wilding, Bolton, Lancashire, England

"Oh, no man knows
Through what wild centuries
Roves back the rose"

"All that's past" Walter de la Mere

FROM fossil remains we know that a species of rose existed 35 million years ago long before man inhabited the earth. The Minoan civilization of 1500 B.C. used roses for architectural decoration and when in modern times they unearthed the temple at Knossos in Crete they found a red rose, probably a damask, depicted on the fresco. Silver coins found in a grave in the Altai mountains were inscribed with roses and these can be traced back to 4000 B.C. It is a long jump from 35 million years ago to 4000 B.C. and that makes the quotation above more apt. From 4000 B.C. to modern times we do not know much more, and much of what follows is based on surmise, backed by the scientific study of genetics. The history of mens' work and play with the rose makes it the more interesting.

Many hybridists both by intention and by chance have contributed to the genealogy of the rose and the road of ascent has followed many stage trails to the frontier posts in the story of modern roses. Before the Romans invaded Britain that country may have known only the wild rose of the hedgerow, *R. canina,* and in Scotland, the Burnet rose but the Romans brought with them, once they began to settle, not only tessellated floors for their temples and villas, but other benefits of civilization including the import of plants such as roses.

R. rubra the red rose of Lancaster came to England with the Roman legions. The Romans had imported it from Greece but even before that civilization it had probably been the rose of the Median fire worshippers of the 12th century B.C. *R. gallica* the French rose is a variation of *R. rubra.* The damask rose may have come from Damascus with the Crusaders. There are two damask roses the Summer and Autumn flowering damasks and both are probably natural hybrids of *R. rubra.* The summer damask = *R. rubra* x *R. gallica.* The autumn damask, *R. bifera* = *R. rubra* x *R. moschata,* the musk rose.

The White Rose of York, *R. alba* resulted from a natural cross in ancient times between *R. gallica* and *R. canina.* It also became the emblem of Bonny Prince Charlie and it is known in Scotland as his rose and as the Jacobite rose. It has been in cultivation since the days of the Greeks and Romans and varieties of it are still grown as shrub roses today.

The Tudor Rose which never grew in any soil was a heraldic mongrel designed to commemorate with the accession to the throne of England of Henry VII the union of the Houses of York and Lancaster. It had nothing to do with the rose 'York & Lancaster' a pink and white damask rose.

Between the departure of the Romans in the 4th century and the 15th century the Dark Ages of History shadowed the growth of the rose while what remained of Christian religion frowned upon a flower that had become a symbol of pagan rites. But Christianity was to absorb much ritual that the worship of the gods of Ancient Greece and Rome entailed and the rose returned to the decor of church and cathedral.

In the 17th century the Dutch began to hybridize perhaps by intention and perhaps by propagating chance mutational sports. It was then that *R. centifolia,* the cabbage rose and its sports, the moss roses, first saw the light of day. The cabbage rose was a cross between *R. alba* and *R. gallica.*

The first milestone on the last lap of the development of the modern rose was reached in 1789 with the importation from China by Sir Joseph Banks of the Pink China Rose. It carried in its chromasomes the important gene that controlled the length of the

flowering period and endowed it with the faculty of repetitive flowering. The China rose flowered throughout the summer and autumn, a feature previously unknown in the Western world apart from a few autumnal flowers on the autumn damask rose.

In the Island of Reunion the inhabitants hedged their gardens with shrub roses of *R. gallica* and the pink China rose. M. Perichon found a chance seedling which showed characteristics of both these roses and propagated it. He sent a cutting to a M. Breon in France. Breon was a gardener to the Empress Josephine who was doing much to further interest in roses by collecting in her gardens at Malmaison as many species and varieties as she could. The rose from Reunion was the parent of the Bourbon roses. The Bourbons back-crossed with the Gallicas and Chinas gave rise to the hybrid perpetuals. The China rose crossed with the musk rose and the Bourbons gave the Noisettes, the yellow tea roses, and the pink tea roses, but the tea roses were anything but hardy and the hybrid perpetuals were not perpetual flowering.

The history of the rose in the nineteenth century revolves around many names, mostly French and English, but one American. The crimson China rose arrived in England through Gilbert Slater in 1792 but it was 'Hume's Blush' tea-scented China in 1809 and 'Park's Yellow' tea-scented China in 1824 which gave the first tea Roses.

Writers who remember the tea roses have claimed that for perfection of form they have never been surpassed and some of the delicate colourings of cream and pink were a sheer joy. If these were their virtues their vice was insufficient hardiness to withstand even an English winter. Moreover, many were climbers. A few including 'Marechal Niel' survive to this day, and this rose can be seen in some glasshouses with a vast crop of magnificent full yellow blooms each early summer.

While the tea roses advanced along one road of development the Bourbon roses followed another path and crossed and re-crossed with the hybrid chinas, the gallicas and others they gave rise to the hybrid perpetuals. These were hardy and mostly strong growing, perhaps too strong. I remember pegging long new shoots of 'George Dickson' parallel with the ground to encourage flowers for

the following summer. But perpetual was a misnomer. The autumn crop of flowers was sparse and intermitent. 'Frau Karl Druschki' and its seedling 'Candeur Lyonnaise' are still unsurpassed even today as white roses.

With John Champneys, a farmer of South Carolina lies the credit for first using the China rose for hybridization. He crossed Parson's 'Pink China' with the musk rose to raise Champney's 'Pink Cluster', a climbing rose. Also resident in South Carolina was a French nurseryman by the name of Philippe Noisette. He sent a plant of Champney's 'Pink Cluster' to his brother Louis Noisette in Paris. Louis Noisette hybridized from the rose and raised the first Noisettianas. These were climbers but crossed with the pink and yellow tea-scented Chinas they were to give birth to the pink and yellow tea roses.

The China roses imported to Britain and France in the ships of the old tea companies had grown both wild in the cantons of China and cultivated in Chinese gardens. They were themselves either naturally or artificially raised from *R. chinensis, R. odorata,* and *R. gigantea* a native of Burma. The modern rose carries in its blood the genes of climbing roses *R. gigantea* and *R. moschata.* The frequency with which a rose may emit a climbing mutational sport can be traced to these ancestors. The China roses were not themselves hardy and on them can be placed the blame for the lack of winter virility of the tea roses. Stamina for cold weather had to be infused from European roses such as *R. gallica* and *R. canina* through the hybrid perpetuals.

In 1867 Henri Guillot raised the first hybrid tea rose 'La France' by crossing the H.P. 'Victor Verdier' with the tea rose 'Mme Bravy'. The hybrid tea roses were not crowned with immediate acclamation though their ultimate success was assured. 'La France' holds no important place in ancestry and it was not until 1882 that 'Lady Mary Fitzwilliam' ('Mme Victor Verdier' x 'Devoniensis') appeared on the garden and breeding scene. 'Lady Mary Fitzwilliam' was the antecedent of 'Mme Caroline Testout' from which in 1935 Wilhelm Kordes sent out 'Crimson Glory'. From this rose have come directly or indirectly many of the most popular roses of the day.

'ICEBERG' (floribunda)
'*Robin Hood*' × '*Virgo*'
Raised by Wilhelm Kordes, Germany
Reproduced by kind permission of the National Rose Society of Great Britain

The pure hybrid teas lacked yellow in their colouration. This defect M. Pernet-Ducher of Lyons, France sought to remedy for many years by introducing genes from *R. lutea,* the Persian Yellow. The trouble with the Persian Yellow was that its pollen was unstable and often infertile. Eventually he succeeded and in 1893 raised 'Soleil D'Or'. The first of the yellow and orange hybrid teas were known after him as the Pernettianas.

After the infusion of blood from a wild rose the immediate progeny from the cross do not show those characteristics which the hybridist may wish to inbreed. It is the grandchildren of a second generation which may show the required feature of the grandparent. For instance, the Persian Yellow fathered 'Antoine Ducher' a climber, before becoming the grandfather of 'Soleil D'Or' an orange yellow pernettiana. 'Rayon D'Or' the first yellow hybrid tea or pernettiana came in 1910. The pernettianas are now so interbred with the hybrid teas that there is no longer any distinction between them.

The Persian Yellow, *R. lutea* brought with it not only an extended range of colours to the hybrid teas but also the liability to poor constitution in the form of weak growth and bad health, an inherent martyrdom to contract black spot, and the occasional featuring of a multiplicity of thorns. This is still seen today in such roses as 'Bacchus' and 'Dorothy Anderson'. It is a debatable point whether the Persian Yellow was more of a menace than a blessing. The colours might have been obtained from other yellow species roses, except that only the Persian Yellow could sport to the magnificent Austrian Copper and this power may in fact have been responsible for the orange and copper tints. Health and vigorous growth have been procured through inter-breeding with other hybrids and other species roses, but it has taken over thirty years to overcome the poor health and growth of *R. lutea* hybrids. These still occur only too frequently among discarded seedlings.

Meanwhile at the end of the nineteenth century another breed of garden roses had been born — the polyantha pompom and from these mated with the hybrid teas were later to evolve the floribundas.

In 1868 the dwarf pink China rose was hybridized with the Japanese multiflora and Henri Guillot raised from the progeny

'Ma Paquerette' and 'Mignonette'. These in the second generation were cluster roses of continuous flowering habit and dwarf growth. The clustered flower spray they inherited from *R. multiflora* and the other two characteristics from the China rose. 'Ma Paquerette' in turn sired the polyantha pompoms including 'Orleans Rose' which in 1923 Poulsen of Denmark mated with 'Red Star' to produce 'Else Poulsen' the first hybrid polyantha.

Between 1910 and 1923 the Rev. J. H. Pemberton in England raised the hybrid musks. These together wtih certain species roses *R. microphilla* (Tantau — Germany 'Tantau's Triumph') *R. rubiginosa* (Kordes — Germany 'Rudolph Timm' and 'Obergartner Wiebicke') *R. multibracteata* (Tantau — Germany 'Floradora and *R. setigera,* the Prairie Rose (Boerner — U.S.A. — 'Goldilocks') all interbred with the hybrid polyantha to evolve the floribunda, the grandiflora, and improved the strains of hybrid tea.

During the last thirty years the development of the modern rose has been influenced by certain hybrids and by certain species. In 1935 Kordes introduced 'Crimson Glory' which has been the parent of many roses in the hands of many raisers. Kordes after the war crossed 'Crimson Glory' with 'Baby Chateau', which he raised from a hybrid musk 'Eva' to produce 'Independence' or 'Sondermeldung'. 'Independence' in its turn sired many modern roses with new colouring and improved health and growth, both floribundas and hybrid teas. In 1945 Meilland of France presented 'Peace' to the world. 'Peace' in a complicated parentage owes hereditary genes to 'Joanna Hill' a yellow H.T. and the Austrian Copper a wild sport of *R. lutea* and 'Peace' has been used much both as maternal and pollen parent.

In America 'Charlotte Armstrong' has been a prolific parent. It was itself raised from 'Crimson Glory' and from it have come not only many H.Ts. but the first of the grandifloras, 'Queen Elizabeth' with 'Floradora' as pollinator. The significance of 'Floradora' was its own parent the species rose *R. multibracteata.*

Fragrance in roses seems to be a feature the hybridists cannot cater for, because this property is a recessive Mendelian factor in the genetic influence of the chromasomes. Colour, vigour, and health they can aim for but with improvements in these fragrance may temporarily disappear only to reappear in unexpected places.

It is a strange phenomenon of hybridization how often breeders in different parts of the world seem to evolve the same colour-breaks about the same time. For example Dickson in North Ireland followed up Kordes 'Perfecta' from Germany with 'Silver Lining' and Oliver Mee in England raised another of similar colouring. Tantau in Germany raised 'Super Star' and Sam McGredy of North Ireland followed with 'Mischief' and 'Miss Ireland', Meilland raised 'Marella' and Laperriere came forth with 'Rebel'. Swin of Armstrong Nurseries U.S.A. raised 'Montezuma' and Tantau followed with 'Fritz Thiedemann'.

The hybrid roses which hybridists seem to be using most frequently are 'Peace', 'Independence', 'Karl Herbst', 'Charlotte Armstrong', 'Fashion', 'Goldilocks', 'Masquerade' and 'Floradora'.

The species roses which have influenced the modern rose are *R. rubra, R. moschata, R. canina,* and *R. phoenicea* in the earlier centuries; *R. indica, R. chinensis, R. odorate* and *R. gigantea* in the 18th and 19th centuries; *R. lutea* and *R. multiflora* in the 19th century; *R. foetida* bi-colour (Austrian Copper), *R. rugosa, R. multiflora, R. microphilla, R. rubiginosa, R. multibracteata* & *R. setigera* (the Prairie Rose) in the 20th century.

REFERENCES

The Book of the Rose — George M. Taylor

Collins Guide to Roses — Bertram Park

The Rose in Britain — N. P. Harvey

Select List of Roses — National Rose Society

The Rose Annual — National Rose Society

The Revolution in Climbers

Emerson Mitchell, Windsor, Ontario

IT is recalled that some years ago it was said that 'Dorothy Perkins' was cluttering up the landscape. It was also stated about the same time that Model T Fords were creating a similar problem on our highways. Many will not agree because it cannot be denied that they fulfilled a very important function in the way of beautification and transportation of that era.

'Dorothy Perkins' was introduced along with 'Climbing American Beauty', 'Excelsa' and others of this type between 1900 - 1910. Many of these varieties were grown 30 years ago and are still to be seen adorning the back fences because they were really back yard roses. I doubt if many of them are being planted in this day because there are more satisfactory types to be had that have a better growing habit, cleaner foliage, and larger flowers. 'Paul's Scarlet' introduced in 1915 is an example of the varieties that have supplanted Dorothy and is much in evidence in these parts. Dorothy was right at home rambling along a fence but with her floppy canes sometimes 15 feet in length was difficult to train in an upright position. Her susceptibility to mildew was another drawback and of course like the others mentioned only bloomed once.

There was a time when folks wanted a climber to cover a fence and the more fence it covered the better. Today they want climbers that require less space and that give repeat bloom and have larger flowers. They want to grow more varieties without the disagreeable task of pruning that the old ramblers required and which often resulted in the shirt being torn from ones back.

In 1930 'New Dawn' a sport of 'Dr. Van Fleet' and a recurrent bloomer was introduced and is still popular today. In 1932 'Blaze' a hybrid of 'Paul's Scarlet' and 'Gruss an Teplitz' came along and at first proved a great disappointment because the propagators in their eagerness to cash in utilized every available bud from the first

plants and they did not recur. Since then it has been renamed 'New Blaze' and does repeat but many were soured by the first experience and never went back.

For years many hybrid tea and floribunda climbers, sports of the bush of the same variety, have been available and the long list of varieties is ever increasing. While some varieties have never sported, relatively new introductions have done so. Most of them put on a good show in June with sparse bloom throughout the rest of the season. On account of their tenderness they have not proven entirely satisfactory especially in the colder climates where they freeze back to the ground or are winter killed. However, in Southern British Columbia and in this area most do well and anyone who has seen them after a couple of mild winters, when it was possible to save plenty of wood, will have seen a breath-taking sight; some varieties having over 100 blooms in June which are usually larger than the parent.

It is in the hybrid climbers that there has been the greatest advance. There are several that are recurrent but despite what the experts say or the blatant description in some catalogues it has not been my experience after growing hundreds of climbers to come across an *Everbloomer*.

During the past 30 years when many rose beautification projects were established in Windsor it was a pleasure to plant 200 climbers on one project, 100 on another and seven or eight of over 50 plants. 'Paul's Scarlet', 'Chaplin's Pink', 'New Dawn' and 'Crimson Conquest' were the varieties used. 'Paul's Scarlet' went into all the plantings alternating with one of the others. They were planted against six foot chain link fences two to a panel of 8-10′ which meant that they were 4-5′ apart. On one project it was suggested that ever bloomers be planted and as this could not be done recurrent bloomers were accepted but it was found that they were not satisfactory as some did not have the vigor nor were they entirely winter hardy with the result that many blank spaces appeared.

If the opportunity presents itself to undertake another project of climbing roses I would wish to plant 'Dortmund', 'Danse de Feu' and 'New Dawn' as they are all vigorous, have strong clean foliage, can stand low temperatures, and are recurrent.

There are several blocks in a residential area here where nearly every home has a rose garden on the front lawn. These homes are in the vicinity of a couple of our larger beautification projects which no doubt has had some influence.

Mass plantings of roses has proven to be the best method to encourage the citizens to plant more roses and beautify their homes. The plantings in Windsor have been on civic property, at industrial plants, and in cemeteries mostly.

In our home garden situated on an average sized city lot there are 50 Climbers in 25 varieties. Many of them, mostly of the later varieties are planted 2′ apart and circle the garden forming a beautiful background with a staggered row of hybrid teas at the base which helps to conceal bare legs. Visitors to the garden remark, 'You sure plant them close'. When tying in the new canes the varieties are interlaced and present a solid mass of colour in June. The more vigorous varieties require more space namely 'Clg. Crimson Glory', 'Danse de Feu' and 'Dortmund' but I would not dispense with them because they pay the rent.

We still have some once bloomers — 2 'Paul's Scarlet' that have been faithful for more than 35 years — 2 'Paul's Lemon Pillar' with large attractive blooms, a strong grower but only for the milder climates; 3 'Guinee' which I consider to be the most beautiful climber but unfortunately tender; 3 'Meg' a lovely single which I understand recurs in milder climates.

It is my opinion that many are disappointed with repeat climbers because they are not given the proper treatment. Our climbers get the same watering and fertilizing as the others. They will not recur if the old bloom is allowed to remain and seed pods develop. I have noticed that some varieties that were not trained horizontally but allowed to grow upright have not repeated while others of the same variety that were so trained have.

'Clg. Crimson Glory' is my most vigorous of hybrid tea climbers and gives intermittent bloom especially in the fall which is larger than the bush. 'Clg. Madame E. Herriot' an old timer the first to bloom gives little bloom after June. 'Clg. Show Girl' which does not get over 6′ has good repeat. 'Clg. Ena Harkness' one of the more recent introductions has excellent quality bloom and is a good

repeater. 'Clg. Gail Borden' first year 6′ with large dark shiny foliage has bloom as large as 'Peace' and at present in October has a dozen large buds after blooming well all summer. It looks like a winner. 'Clg. Caprice' while it has only reached 5′ in two years is very beautiful and the closest to an *Everbloomer*.

'Clg. Worlds Fair' is the best of the floribunda climbers with me — we also have 'Fashion', 'Korona' and 'Spartan' in climbers. 'Magenta' in the bush grew to 6′ and it is trained as a pillar on the fence where it puts on a good show.

Three recent introductions in recurrent climbers — 'Red Empress', 'Don Juan' and 'Royal Gold' are impressive having hybrid tea type bloom, but it is apparent by their foliage that they have too much tea blood to withstand severe cold.

There are several shrub roses that make splendid pillars — 'Fruhlings Morgen' — 'Fruhlings Gold' and 'Wildfeuer' only once bloomers but there is nothing to beat them for a real show and they are winter hardy. There is also the Moschatas which repeat well and are hardy — 'Berlin' — 'Bonn' — 'Elmshorn' and 'Sparrieshoop' and the best recurrent bloomer of all the shrubs — 'Lichterloh'.

It is wishful thinking to expect a climber with hybrid tea type bloom to withstand sub-zero temperatures; and to classify a climber that puts forth a display in June followed by insignificant intermittent bloom as an *Everbloomer* is a gross exaggeration.

Arranging Treasures From Our Gardens

Elaine Cochran, Past President, San Francisco Rose Society

I SHALL always remember how I became interested in the art of flower arranging. We moved from Chicago, Illinois, in 1949 to the fabulous and beautiful city of San Francisco, California, to make our new home.

With its green rolling hills and bright blossoms bursting all through the seasons, this emerald-jeweled city captured our hearts. We were fortunate that our new home was landscaped with many beautiful flowers, foliages and shrubbery, plus six rose plants. One can understand the joy we were experiencing after living in apartments for so many years.

Knowing little or nothing about my new garden, I was determined to learn every plant and its culture. One rose bush appeared to be dead with the exception of a twig with one rose on it. I cut it off at the bud union, intending to replant a new variety, but in the meantime I had a long confinement in the hospital.

Then something wonderful happened! When I returned after many months, I saw that the rose bush I had cut off at the bud union was reborn with five new canes and was in full bloom. "A miracle has happened!" I exclaimed. What an inspiration to see God's hand at work, I thought. If such beauty could grow from a seemingly dead stump, then there is a chance for me. I too was touched with His great blessing that day.

Since I joined the American Rose Society in 1952, I was filled with a burning desire to love and learn the culture of the rose. Today I teach and lecture on flower arranging, but not before I studied with good teachers and won sweepstakes awards in many flower and rose shows, on both specimen blooms and arrangements.

I maintain my own garden of 150 rose plants as well as many other flowers, exotic foliages and make my own ceramic pottery containers.

Teaching and lecturing on the art of flower arranging has become a delightful and rewarding experience for me. I come in contact with the members of many garden clubs and other societies interested in this fascinating art. From these groups I have found potential arrangers who lack the courage to venture forth. Invariably their remarks are the same. They either "lack talent" or "are all thumbs."

This is an excellent time to retore their confidence by presenting a clearer picture of what flower arranging is all about, and to encourage them to take instruction rather than to start off haphazardly on their own. There are many people interested in flower arranging. However, there is a certain percentage who never have had any art training.

In the early part of my teaching, I recognized signs of frustration on the part of my students through lack of training in the arts. Since then, I have discovered a method of teaching such groups that helps to eliminate most of the confusion. Classes limited from 15 to not more than 25 students and sessions held for not more than three hour periods are most desirable. This group size and class duration presents a greater opportunity both to the novice and the amateur. Several lecture demonstrations are needed to provide adequate information. Students then become familiar with many of the facets of flower arranging.

The first assignment is a simple vertical line arrangement, and each composition arranged by the student is then given individual, constructive criticism in the presence of the entire class. Dismantling and rearranging each arrangement emphasizes the elements and principles of design many times.

What are the elements of design in flower arranging? Line, form, texture, color, space and harmony. Here are a few notes on what constitutes design:

Basic lines used in arrangements are achieved from two sources: the circle and the straight line.

1. The variations achieved from the circle are a) quarter circle, b) half circle or fan-shape, c) crescent (like a new moon), d) oval

(anelongated circle), and e) Hogarth Curve, a wide "S". With arrangements derived from the circle, containers and plant material should have round or curved lines.

2. Variations of the straight line are a) triangle, b) rectangle, c) pyramid, d) diagonal, e) horizontal and f) vertical. The element of line leads the eye through the arrangement without interruption.

Never cross lines. Each line has a purpose and a meaning. The perpendicular or vertical line expresses strength and signifies power and dignity. To exemplify this, plant materials should be elongated spikes, snake or jointgrass, cat-tails and foliage, tapered scotch broom before flowering, upright red barberry, iris leaves, yucca, mother-in-law's tongue, sanseveria, New Zealand flax, pussy willow branches in spring with swollen buds, spiked flowers, gladiolus, larkspur and long stem roses in bud form. Suggested vertical containers are pillars, cylinders, stem goblets, slender compotes, urns and tall bottles.

Horizontal lines are restful lines. They suggest repose, steadiness and stability. I favour this line for lunch and dinner table arrangements because it enables those seated at the table to view the arrangement below the eye-level and to speak easily to guests seated directly across the table. There can be many interesting variations with this line. A stylized line in the modern design can suggest a special sleekness. The size and shape of the table should determine the width and length of the arrangement. For an oval table 72″ long, I may use a 10″ low oval contained in yellow-green, 7 light yellow gladiolus 9″, 12″, 15″ long with natural curved tips to create a Hogarth line or wide "S", 11 'Sutter's Gold' roses, the longest stemmed buds cut 11″ long, the remaining roses graduating down in sizes to fit the curve line of the gladiolus. Start the design with the two longest 'glads' to form a wide "S". Place the next longest on the outside curve and finish with the remaining 'glads' on the outside curve. Remove most of the rose foliage except near the bud and place the longest bud (11″ long) on the inside curve. Continue placing the roses in decreasing stem-length toward the focal point of interest. In placing the focal rose on each side of the arrangement, face the flowers at an angle, towards the center of the container and not back to back.

Form is the second element of design. All the arts including arranging start with line; then comes form. When you have achieved the line, the form follows, determining the shape. Study the shapes of flowers and fruits, then learn to work for form. A rose is a form when in bud, when it opens it becomes a shape.

Texture refers to the surface of plant material. It may be fine, coarse, rough or smooth. A well-balanced flower arrangement needs to be composed of contrasting textures of materials. When they are combined in an arrangement, one should predominate over the other. (Tulips and roses are smooth, calendulas and zinnias are coarse, chrysanthemums are fine in texture.)

The plant material will determine the type of container to be used in the arrangement. The container should be subordinate to the material.

Color is a vital element of design. Therefore the arranger should study the color wheel and learn how to use it correctly. Here is an easy approach for the beginner: Place tissue paper over a color wheel and with a pencil reproduce the wheel six times. Trace all the lines and circles on each one, marking each color around the edge. In the center join the lines to make analogous on one wheel, split complementaries on another, and so on.

Space is necessary in the arrangement for the flowers to open in a graceful manner. Then the eye can travel through the arrangement without clutter. The bouquets our grandmothers made are a perfect example of the lack of space.

PRINCIPLES OF DESIGN

Proportion refers to relationships existing between all materials used in a completely balanced composition. Blending of colors from light to dark, physical scale of plant materials, relation to the container and the use of light, texture and pattern bring together all the parts to make a whole arrangement.

Balance can be difficult for the beginner to understand because it is a visual impression of weight. A field trip to a park or to the woods is extremely effective because it enables the students to see balance of structure and colour. Trees are a perfect example of the

visual balance needed in flower arranging. The greatest weight is at the trunk of the tree and radiates through the branches to the tips where color and weight diminish. Weight and color increase at the waist or half-way mark in the composition. The largest and darkest flowers are placed at the lip of the container for weight. This is the focal point.

Dominance is a leading element in the design. It can be demonstrated in the use of a strong color in the arrangement which subordinates all other hues and interests. In nature, we see the perfect example of dominance and subordination in blooming plants of cattleyas and cymbidiums. The dominant flower subordinates the foliage.

Rhythm is a flowing motion that carries the eye pleasantly through the design. It can be achieved in the main lines of the arrangement or by blending complimentary colors to form a union between all material in the composition.

Scale means selecting containers and plant materials that are related to each other in size and proportion. Compare the miniature arrangement with the mass arrangement in proportion. One can readily understand the importance of proper scale.

Repetition is obtained by repeating the same elements of design in the composition. It is important not to carry it to the extreme, otherwise it can become as obvious as Pinocchio's nose.

HINTS ON CUTTING AND PRESERVING SHRUBS AND FLOWERS

All plant material should be cut in the morning, or the evening of the day before its use in arrangements. There are many ways of hardening off flowers and foliage. The following methods are generally considered most effective:

Cut blooms at a 45° angle.

For flowers cut the night before using, slip the stems in a long wrapping paper funnel before placing them in 2″ of water as hot as one can stand the hand in. The paper protects the blooms from steam. When the water cools, fill the vessel with cold water and store in a cool, dark area free from drafts.

Tulips droop in arrangements. If one jigger of gin is added to the water, they stand up erect. For a focal flower, cut the stem short and place it in a water glass with one part gin and one part water. The tulip will open like a hibiscus.

Succulent type foliages. It is essential for arrangers to become familiar with the different types of foliages such as calla leaves, canna, begonia, hosta or funkia, and geranium leaves. Cut these in the evening, wash clean and make a slanting cut in the stem. Place in 3″ of lukewarm water and store in a cool dark place. *Hot water deteriorates succulent stems.*

Hardwood stems such as chrysanthemums, azalease, rhododendron, laurel, hydrangeas, magnolia, flowering fruit branches, pyrocantha with berries and woody wisteria should be broken or torn *and not cut,* then plunged into 3″ of boiling water and allowed to cool. Then add warm water and store 6 hours. Remember, never cut these stems.

Singeing hollow stems like hollyhock, poinsettia, oriental poppies, euphorbias and wild flowers such as milkweed is necessary to prevent bleeding. These materials need to have their stems cut the desired length for the arrangement before they are singed. Then protect the blooms in wet cloth and hold the stems in a horizontal position over a candle flame or an alcohol lamp until the stems are scorched black, about ½″ on the cut end. Plunge into cold water before the ends cool. Charred ends act as a filter and allow flowers to take up water. Let the material stand for several hours. If new cuts are to be made, the same process must be repeated.

Good mechanics are essential, necessary for physically holding the arrangement together. All containers must be fitted with some type of flower holder. Needle-point holders may be purchased in various shapes and sizes, ranging from ½″ to 5″ in diameter. The best quality include rust proof brass pins on a lead base. Needle-point cup-holders can be made at home for a fraction of the cost by using a 2″ tuna can, floral clay and a needle-point holder, covering the outside of the can with Mystic tape or corsage tape.

Tall containers and other difficult shaped containers can be fitted with crushed 2″ chicken wire or hardware cloth. This material can be obtained by the linear foot from hardware stores, and in many

gauges: 1/8", 1/4", 1/2" and 3/4". Measure the depth inside the container with a ruler to 3/4" below the lip. Cut a strip of the 1/4" hardware cloth to this width and approximately 15" long for a 3" opening. (The larger the opening of the container or the heavier the materials to be used, the coarser the hardware cloth should be.) Corrugate back and forth over a long pencil or 1/2" dowel rod. Fit the corrugated cloth into the container. It should fit snug (not forced, or it can crack ceramic ware.) Hardware cloth has many other uses and saves damage to needle-point holders. Use it around candles, the base of branches, driftwood, slag and vertical rock formations. Shape around the base of the material being used, making sure the cloth is high enough to hold the material firm. Then overlap and secure it with floral wire and cover with corsage tape. For example, wrap a standard candle with a 3" x 4" strip of 1/8" mesh hardware cloth. Slip the cloth off the candle and finish as directed above. Slip back on to the candle, leaving 1" extending past the base, then press onto the needle-holder to hold the candle in position.

It would be impossible to list all the mechanics and their uses in such a short article. However, I would suggest buying a complete book on flower arranging to further your knowledge of this subject.

In closing, I would like to leave you with this thought. Learn to create beautiful flower arrangements — and share them with others.

Our Chemical Fertilizers

Orville E. Bowles, Editor

BEFORE the birth of the chemical fertilizer industry, a little more than a century ago, it was freely predicted that the world's population would soon outgrow its food supply. Then war, pestilence and famine, caused by over population, would plague the earth and hold the population growth in line with food supplies.

Since that time the world's population has more than doubled yet countries like Canada and the United States after feeding their own people — often too well — and a good part of the world, create great food surpluses that are frequently difficult problems. It is true that much of the world's population is still undernourished but this is the result of social and economic problems. The known resources of fertilizer materials throughout the world, coupled with our modern technology, will enable the production of almost limitless amounts of food for many generations to come. The remaining problem of feeding the world's starving millions is not one of production but rather of education, economy and the application of modern agricultural technology.

As would be expected in such an important agricultural country as Canada the fertilizer industry is efficient, well organized, and a very important factor in the country's economy. For the year ending June 30, 1960 Canada produced 1,414,217 tons of fertilizer materials and this production was widely spread throughout the provinces. For the same period there were used within the country 935,428 tons, as compared with 321,207 tons in 1930 which gives an indication of the increasing use of fertilizers in Canada.

Apart from some anhydrous ammonia imported from the United States most of the nitrogenous fertilizers used in Canada, or exported, were of domestic manufacture as we have many large plants producing these materials.

Canada does not have any important deposits of phosphate rock from which phosphorus is obtained. In parts of Northern Ontario and Quebec there are deposits of phosphate-carrying rocks which have been investigated from time to time but they have proven to be generally unsuited for use under present circumstances due to limited size of deposit, depth of overburden, inaccessibility, or low phosphate content. We accordingly have to import all our phosphate materials which come entirely from the United States. For the year ending June 30, 1961 this import amounted to 712,268 tons of phosphate rock and 205,000 tons of fully processed superphosphate.

We do not have as yet any domestic source of potassium and during the period mentioned imported 140,625 tons from the United States and Europe, and of this import it is estimated that 97 per cent would be fully processed. Oil well drillings in Saskatchewan in 1947 resulted in the discovery of what is believed to be the world's largest and richest potash deposit. This deposit runs into an estimated billions of tons and sufficient to support production for hundreds of years. It is a very rich deposit, grading up to 25 per cent potash, but unfortunately located under 3,000 feet of water and sedimentary formations which have proven very difficult to penetrate — and very costly. After 12 years of heart-breaking failure, hard experience, and the expenditure of some $70,000,000 on drilling, buildings, machinery, labour, research, design and experimentation, success now seems assured. The Department of Mineral Resources of the Province of Saskatchewan now estimate that two mines will come into full production during 1962, and others will follow rapidly over the ensuing five years. When mining is well under way we will have ample potash for our own domestic use and a considerable surplus for export.

While the purpose of this article is a review of our chemical or inorganic fertilizers acknowledgment must be made of the great contribution made to mankind by the natural organic fertilizer materials, dating back in some instances to earliest history. Up until the discovery of the Chilean nitrate deposits, phosphate rock and potash deposits, these organic materials represented the sole source of plant food. They consisted principally of animal by-products such as dried blood, bone meal, fish meal, hoof and horn meal,

and animal tankage; the various manures and sewage sludge and such plant residues as cottonseed meal, linseed meal, rapeseed meal and soybean meal. An important source of potash was plant and hardwood ashes.

Many of these materials are still in popular demand for horticultural purposes and their use is only limited by their availability. In recent years many of them have been upgraded in use and value and to a major extent animal tankage, blood, bones, fish scrap and seed meals, have been diverted to use in animal feeds so that they have become largely unavailable economically as fertilizer. As late as 1900 a major part of the fertilizer being used was supplied by the organic materials mentioned but since that time, due to more lucrative markets and their low plant-nutrient content, and high unit cost in comparison with chemical fertilizers, the percentage now being used has dropped to an insignificant figure.

The fertilizer industry has been built principally on the supplying of materials containing nitrogen, phosphorus, and potassium but there appears to be an increasing realization of the values and importance of the so-called secondary and trace elements. We will now review briefly the technological advances of the industry and the products that have been made available.

NITROGEN

The function of nitrogen is to produce rapid growth; give dark green color to plants; increase yields of leaf, fruit or seed; improve quality of leaf crops; increase protein content of food and feed crops, and feed soil micro-organisms during their decomposition of low-nitrogen organic materials.

Since one of its primary functions is to promote the development of stem and leaf it is required largely during the earlier weeks of growth. Too little nitrogen results in stunted growth with yellowish foliage while too much, in the absence of adequate supplies of phosphorus and potassium, causes rank growth that is inclined to be subject to disease. The supply of available nitrogen in the soil determines largely the extent of plant growth and the ability of the plant to avail itself of other elements of plant food present. Nitrogen, in most of its compounds, is readily water soluble and therefore quickly available to plants. It is difficult and expensive to attempt

to store large quantities of nitrogen as a reserve in the soil because the portion not taken up by the plant is quickly leached from the soil by heavy rains or watering, particularly in the case of soils of a light nature.

The original source of nitrogen was the organic materials which have been noted but this was greatly supplemented by the discovery, and development, of the Chilean sodium nitrate (nitrate of soda) deposits. The first of this material started to reach the continent in the 1830's and steadily increased until the peak was reached in 1929.

The second boost to the nitrogen supply came in the 1890's with the development of processes of recovery of ammonia as a by-product of coke production. *Ammonium sulphate* from this source still makes an important contribution to the supply of nitrogen.

The atmosphere is a continually renewing inexhaustible reservoir of nitrogen in elemental form — about 34,000 tons over each acre of the earth's surface — which cannot be utilized by plants until combined with hydrogen by chemical means. In the 1920's, after decades of chemical and engineering research, the great 'break through' came with the discovery of a process combining nitrogen and hydrogen under pressure to form anhydrous liquid ammonia. Synthetic ammonia thus became the principal nitrogenous material from which the large variety of nitrogenous compounds required by the modern fertilizer industry were to be developed. Owing to the inexhaustible source of this fundamental material the fear of world starvation was banished forever. The early prophets of want and doom had no way of knowing of the inventive genius of generations to follow.

Anhydrous Ammonia (NH_3), also referred to as synthetic ammonia is so fundamental and important in the production of plant-nutrient nitrogen that we should take special note of its properties. It has a very high nitrogen content of 82.25 per cent and is used for direct application but since it has such a high vapor pressure, and must be shipped and stored in pressure containers, it has a wider use as raw material for the production of nitric acid which is an intermediate for such nitrate fertilizer materials as *ammonium nitrate,*

sodium nitrate and calcium nitrate. It is also used to neutralize acid materials to form ammonium salts, so useful as nitrogen fertilizers. Another important use is its convertability to synthetic urea, an organic nitrogen compound which has wide fertilizer application.

In discussing the following principal solid nitrogen fertilizer materials produced on the continent we will try to avoid, as much as possible, the detail of complicated processes in their manufacture and give a general outline of their derivation, and other information that we think will be of interest to our readers.

Ammonium Nitrate NH_4NO_3, a comparatively new fertilizer that has become available since World War II, and has rapidly become the most widely used and recommended nitrogenous fertilizer. It contains 35 per cent nitrogen — 17.5 per cent as nitrate nitrogen and 17.5 per cent as ammonia nitrogen — which is of particular advantage in wet, cold springs when soil nitrification is slow to begin, and the ammonium half assures a continuing growth. Its high concentration reduces the cost of transportation. *Ammonium Nitrate* is made synthetically by chemically combining anhydrous ammonia with nitric acid and when the reaction is complete the water is evaporated leaving a concentrated ammonium nitrate melt. This is then sprayed in a prilling tower, or granulated by some other procedure, which has overcome the former problem of caking. Owing to its nitric acid content and corrosive action the equipment for manufacturing this very popular nitrogenous fertilizer must be fabricated from stainless steel or other special alloy.

Ammonium Phosphate $NH_4H_2PO_4$ is usually made in conjunction with the manufacture of phosphoric acid as integrated plants can operate very efficiently and with flexibility. We have one of the world's largest operations of this type at Trail, B.C. The fertilizer grade *monoammonium phosphate,* which usually contains a minimum of 11 per cent nitrogen and 48 per cent phosphoric acid, is made by passing anhydrous ammonia into crude 50 per cent phosphoric acid. This monoammonium phosphate, with further additions of *sulphate of ammonia* or *anhydrous ammonia,* yields a series of grades of *ammonium phosphate,* a common one being the popular 16-20 grade; 16 per cent nitrogen and 20 per cent phosphoric acid. These materials are highly concentrated and thus have

a low transportation cost. They contain their nitrogen and phosphoric acid in water soluble form and the availability of the nitrogen is about the same as *ammonium sulphate*. They have by far the greatest use of all fertilizers in Canada as they are particularly well adapted to the grain crops of the Prairie Provinces where potash is not generally a soil deficiency.

Ammonium Sulphate $(NH_4)_2SO_4$, one of the older nitrogenous fertilizers that has been available largely as a by-product of the coke industry. It contains 20 to 21 per cent nitrogen in the ammonia form and therefore not as quick acting as the nitrate nitrogen. It gives best results when the soil is well supplied with lime and owing to its acidifying effect continuous watch on the soil reaction is necessary. In recent years the by-product production has not been sufficient to meet the demand for this popular fertilizer and the supply has been greatly augmented by the neutralization of sulphuric acid with synthetic ammonia.

Sodium Nitrate $NaNO_3$ (Nitrate of Soda) An old standby in the fertilizer industry; in fact it was the first of the nitrogenous chemical products, and still has considerable support. Sometimes referred to as Chile saltpetre due to its origin. The Chilean deposits were first reported in 1809 and it is thought the Spaniards began mining operations about 1813 but it was not until the 1830's that the first shipments started to reach our continent. The nitrate deposits lie on the eastern slope of the Coastal Range in the desert between this range and the Andes Mountains in Northern Chile. The entire region is barren without vegetation, water or fuel, so that all facilities for operation and living have to be developed. This desert was at one time called 'The Desert That Feeds The World' and contains the ore body that is about 450 miles long and from 10 to 50 miles in width. Until recent years this deposit was the only source of this fertilizer but synthetic *sodium nitrate* is now made by neutralizing sodium carbonate with nitric acid produced from anhydrous ammonia, evaporating the neutral solution, and isolating the solid sodium nitrate.

At one time *sodium nitrate* was the only commercial source of nitrate nitrogen available. It has the same properties as the nitrate part of *ammonium nitrate* — quick availability, only slight residual effect, and high leachability. Its high cost, per unit of nitrogen, as

compared with *ammonium nitrate* places it at a disadvantage in today's market.

Urea $CO(NH_2)_2$, the newest of our chemical fertilizers which has just recently become available in a form and at a price attractive to the users, as it is now produced in pelleted form at a price comparable with *ammonium nitrate*. It is not as quickly available as *ammonium nitrate* but the manner in which it resists leaching allows it to be used in the fall. *Urea* had its beginning as long ago as the 18th century when chemists isolated a nitrogenous substance from animal urine and called it urea, the first synthetic organic material to be compounded. At the time of its initial isolation it was believed that only living plants or animals could produce organic compounds but in 1828 a German chemist named Wohler compounded a synthetic urea from ammonia and cyanic acid. Today *urea* is made by reacting nitrogen and hydrogen under high temperature and high pressure to make ammonia, which is then reacted with carbon dioxide to form *urea*. This product seems to hold great promise due to its resistance to leaching, and its high nitrogen content — 42 per cent — places it first in nitrogen content amongst the solid nitrogen materials.

Calcium Cyanamide $CaCN_2$, contains 20 per cent nitrogen. Canada has at Niagara Falls, Ontario the only plant in the Western Hemisphere producing *calcium cyanamide* through the reaction of nitrogen with calcium carbide. The usefulness of *calcium cyanamide* is restricted by its high alkalinity which severely limits its inclusion in mixed fertilizers. There is also need for special precautions in its field application. The plant at Niagara Falls, operated initially in 1910, is thought to be the only remaining commercially used method for synthetically fixing nitrogen, other than by the ammonia synthesis. A large portion of this plant's production is exported to the United States where the process was discontinued many years ago in favor of the synthetic ammonia process.

PHOSPHORUS

Phosphorus stimulates early root formation; gives rapid and vigorous start to plants; hastens maturity; stimulates blooming and aids in seed formation; gives winter hardiness to fall-seeded crops.

For the majority of crops grown on soils naturally low in plant food, or which have become so through cropping, applications of a complete fertilizer containing a relatively high percentage of phosphorus have been found to give the best results. The importance of phosphorus in crop production is emphasized by the fact that unsatisfactory plant growth more often is due to a shortage of this element than of any other plant food.

The soil is the principal reservoir of plant-nutrient phosphorus but the quantity and form of this element found therein is often such that crops cannot obtain their full requirements from this source alone, and have to have supplementary feedings. Often this native phosphorus is 'fixed' in very insoluble form and does not give up sufficient of the element to meet plant requirements. While phosphorus is also found in sea water, plant and animal remains, manure and crop residues, the most important source are mineral deposits in the form of phosphate rock from which phosphoric acid is made.

The reserves of phosphate rock are widely spread throughout most of the world but the largest known reserves are located in French Morocco and the United States. As mentioned previously, Canada imports all the required phosphoric acid in raw phosphate rock or fully processed products, and these imports come chiefly from the states of Florida, Tennessee and Montana. The United States has known reserves of about 15 billion tons or roughly one third of the world supply which it is estimated will last 2,000 years.

Superphosphate is the principal carrier of available phosphoric acid and according to the Fertilizers Act must contain at least 18 per cent of available phosphoric acid. *Superphosphate* is made by treating ground phosphate rock with sulphuric acid and by this process most of the phosphoric acid is rendered soluble in water and available to plants. In the manufacture of *superphosphate* sulphate of lime or gypsum is also formed and 18 per cent superphosphate contains about 40 per cent *gypsum* — valuable in itself as a supplier of *calcium* and *sulphur*.

Superphosphate is by far the most popular phosphatic fertilizer on the market today and accounts for about 90 per cent of all the phosphoric acid being used. The ready availability of its phosphoric

acid enables it to exert its maximum beneficial influence during the first season. It is suitable for application to virtually all soils. In the past *superphosphate* was frequently known as 'acid phosphate' and this name created the impression that the use of this fertilizer induced an acid condition of the soil. Experiments have clearly shown that well-made *superphosphate* does not increase the acidity of the soil.

Triple Superphosphate, contains from 42 to 48 per cent phosphoric acid and is made by using liquid phosphoric acid instead of sulphuric acid when treating the ground phosphate rock. It contains only traces of *gypsum* and thereby only traces of *calcium* and *sulphur.* While it was made as far back as 1915 it was not until 1930 that it was produced in quantity. This material is used principally in formulating high-analysis fertilizers or where long freight hauls make it the more economical source of phosphorus.

Ammonium Phosphate $NH_4H_2PO_4$ was mentioned under the nitrogen section as it is a multi-element fertilizer containing 11 per cent nitrogen and 48 per cent phosphoric acid. Since 1930 the 11-48-0 and the 16-20-0 grades of *ammonium phosphate* products have been made on a large scale at Trail, B.C. from locally produced sulphuric acid, synthetic ammonia and Montana phosphate rock. A large portion of the output from this operation is imported into the United States for use as fertilizer in the Pacific Coast and Mountain States.

Phosphate Rock for Direct Use as Fertilizer. As far back as 1860, and before the development of the more soluble and quicker acting *superphosphate,* raw phosphate rock was extensively used as a fertilizer in some farming areas. With the advent of the new processes phosphate rock for direct application has largely disappeared in Canada as only a portion of the phosphoric acid was available and soil improvement through its use was a long range programme. *Basic Slag,* a by-product of the manufacture of steel in blast furnaces and while at one time considerable was used it is no longer manufactured in Canada and since it has been largely discontinued it is mentioned for completeness only.

POTASSIUM

The earliest settlers arriving in America found the Indians applying ashes to their cornfields as fertilizer and in those early colonial

days potash production from wood ashes grew to be a thriving business. England looked to her colonies in the New World to supply potash for her production of fertilizer as well as ceramic, soap, dye and tanning products.

It was during the period 1839 to 1843, while drilling for common salt near Stassfurt, Germany that the discovery of salts containing *sodium, calcium, potassium, magnesium sulphates* and *chlorides* was made. At the time this was a big disappointment as a source of purer common salt was being sought. However, the extensiveness of the deposits prompted a search for uses and Liebig's studies of the effects of potash on plant growth, and the experiments made on sandy soil in North Germany, sparked the development of these deposits. Although other potash deposits were discovered in other countries the German mines constituted the world's chief source of supply.

With the outbreak of World War I this supply was cut off and a feverish search for other sources was begun. Geologists turned to the Permian Salt Basin which covers an area of some 70,000 square miles and underlies the earth's surface in that portion of the United States extending from south eastern New Mexico, through the panhandle section of Texas and Oklahoma, and north to Kansas in Eastern Colorado. Here at one time was a large inland sea, probably an arm of the Gulf of Mexico, which receded some 200 million years ago and deposited a large salt bed that reaches a thickness of several thousand feet in some areas. Here the rich Carlsbad beds are located and they constitute the greatest known potash resources in the United States. A number of other sources of soluble potash have been discovered throughout the world including Spain, Poland, and the Soviet Union to mention but a few — we have already noted the extensive deposits discovered in Canada in recent years.

Potassium imparts increased vigor and disease resistance to plants; produces strong stiff stalks and canes; increases plumpness of grain and seed, and imparts winter hardiness. In addition it performs certain vital functions in the growth and development of plants, the most important being the aid given in the formation and movement of carbohydrates — starch, sugar and cellulose — within the plants. Hence it is that crops rich in these constituents are especially benefited by potassic fertilizers. While fruits, large and small, and the

leguminous plants such as clover often respond to potassium, wheat and oats seldom do, except on light sandy soils usually low in *potassium*. These crops appear to have little difficulty in obtaining sufficient *potassium* from the majority of soils for their need. Barley on the other hand is often improved in yield and quality by a potassic fertilizer, especially on light lands. Of the three major elements of fertility *potassium* is less frequently deficient in soils than *nitrogen* and *phosphorus*. Clay loams, as a rule, are well supplied with *potassium* and may not give an apparent response to potassic fertilizer. It is more particularly on sandy and gravelly loams, soils containing lime and those rich in vegetable matter, such as mucks and peats, that potassic fertilizer can be expected to respond.

In the trade the word *potash* is commonly used to refer to the various materials that are sources of *potassium* and whose potassium content is customarily expressed in terms of the equivalent potassium oxide (K_2O). There are many minor sources of *potassium* such as hardwood ashes, to which reference has already been made, blast-furnace and cement-kiln dusts, copper-mine tailings, seaweeds and seawater, sugar and alcohol wastes. The main source are minerals containing such materials as sylvite, carnallite, and langbeinite. These minerals are mined similar to coal and crushed and screened at the mine site. A portion of this raw product known as manure-salts is used for direct shipment to market and while they contain about 25 per cent (K_2O) they are used very little today.

Potassium Chloride. There are several processes of refining in standard use but in the flotation process the remaining ore is further crushed and then purified by a mechanical separation from the *sodium chloride* (table salt), *magnesium chloride,* and other impurities with which it is mixed. This is accomplished by the addition of air to the brine and a flotation agent which allows the potash to be floated off, dewatered and dried in rotary driers to produce standard *potassium chloride,* more commonly called *muriate of potash* and containing 60 per cent (K_2O). This is by far the most popular fertilizer grade accounting for 85 per cent of the potash used in agriculture and supplies *potassium* in the cheapest form under most conditions.

Potassium sulphate, also called *sulphate of potash* contains 50 per cent (K_2O) and is also made by different processes but one of the

most popular is the converting of *potassium chloride* (muriate of potash) with sulphuric acid to form *sulphate of potash* and hydrochloric acid. This process is most commonly used in the oil-producing southwest section of the United States where the co-product hydrochloric acid finds local use in the treating of oil wells. Hydrochloric acid is a colorless gas, soluble in water, and since its base are the salts called chlorides or muriates its removal takes out much of the chlorine for which tobacco, potatoes and possibly some other plants have an intolerance.

Sulphate of potash-magnesia is a third source of mineral potash which has been used successfully where magnesium is also in low supply. It is sold under the trade name 'Sul-Po-Mag' and is derived from the mineral langbeinite. It contains about 22 per cent water soluble potash in the form of *potassium sulphate* and in addition about 55 per cent of *magnesium sulphate* (Epsom salts) which yields not less than 16 per cent water soluble *magnesium* calculated as (MgO). It is also rich in *sulphur* as will be seen.

SECONDARY PLANT NUTRIENTS

We have now had a brief look at the major elements of fertility — Nitrogen (N); Phosphorus (P_2O_5); and Potassium (K_2O). *Calcium, magnesium* and *sulphur* are also highly important plant-nutrient elements although they are often termed 'secondary nutrient elements' as large quantities are applied to the soil through their incidental occurrence in fertilizers, or from other sources such as farm manures, liming materials, *gypsum* and elemental sulphur when used as soil amendments. Although *calcium, magnesium* and *sulphur* are conveniently classed as secondary nutrient elements it should be emphasized that in general they appear to be as essential for plant growth and nutrition as are the major or primary nutrient elements.

The development of more highly refined materials carrying more *nitrogen, phosphorus* and *potassium* has reduced the supplies of some secondary and trace elements in fertilizers. Also with intensive cropping and greater emphasis on higher yields per acre, and with our soils becoming older and more depleted, the need for all essential elements becomes more pronounced. It is now known that poor yields are often due to deficiencies of one or more of the secondary

or trace elements; therefore for better crop production more attention must be given to these nutrients.

Calcium (CaO) promotes early root formation and growth; improves general plant vigor and stiffness of stems and canes; influences intake of other plant foods; neutralizes poisons produced in the plant; encourages grain and seed production; increases calcium content of food and feed crops. The average *calcium* content of all mixed fertilizers is about 17 per cent. Ordinary *superphosphate* contains about 27 per cent *calcium* and since it represents nearly half the total weight of mixed fertilizers it is therefore the source of from 70 to 75 per cent of their *calcium* content. Some other fertilizer materials and soil amendments having a high *calcium* content would be hydrated lime, *calcium cyanamide,* wood ashes, bone meal (raw), and *gypsum,* to name a few.

Magnesium (MgO) is an essential part of chlorophyl which gives the green color to leaves; is necessary for the formation of sugar from carbon dioxide, water and sunlight; regulates the uptake of other plant foods; acts as a carrier of *phosphorus* in the plant; promotes the formation of oils and fats and plays a part in the translocation of starch. It is generally deficient in soils that have not been limed, and unlike *calcium,* very few of the primary nutrient materials contain large amounts of *magnesium* — the exception being *sulfate of potash-magnesia* which contains not less than 16 per cent water soluble *magnesium* as has been mentioned.

The *magnesium* supplied in mixed fertilizers is usually in the form of dolomite limestone which serves the triple purpose of supplying low-cost *magnesium;* reducing or eliminating the acidity of the mixture, and improving its physical condition. Apart from *sulphate of potash-magnesia,* which we have just mentioned, other important sources would be *magnesia, magnesium sulphate* (Epsom salts) and *magnesium oxide.* According to authorative fertilizer chemists the addition of 5 pounds of dolomitic limestone per pound of nitrogen derived from *ammonium sulphate* or 2.5 pounds per pound of nitrogen derived from *urea* or *ammonium nitrate* would be adequate to neutralize soil acidity resulting from the use of such nitrogen carriers.

Sulphur (SO_3) is present in many fertilizer materials and soil amendments as the average sulphur content of mixed fertilizers is

nearly 20 per cent. It is an important constituent of fertilizers as it gives increased root growth; helps maintain dark green color; promotes nodule formation on legumes; stimulates seed production and encourages vigorous plant growth. As mentioned the chief supply is through fertilizer materials particularly *ammonium sulphate, magnesium sulphate, gypsum, superphosphate,* and *potassium sulphate.* Large quantities of sulphur are also added to the soil through the use of insecticides, fungicides and animal manure. Smoke, electrical storms, fumes and gas introduce sulphur into the air which in the aggregate is an immense quantity and this comes down in rain water. This has been found to run as high as 230 pounds per acre depending on the amount of sulphur-bearing smoke, fumes and gases emitted into the atmosphere of the locality.

TRACE PLANT NUTRIENTS

The trace plant food elements also called 'minor elements' are *boron, manganese, copper, zinc, iron,* and *molybdenum.* Although relatively small quantities are required all are necessary to plant growth and much attention is now being given to these elements and their importance in plant nutrition.

Unsatisfactory plant growth in many areas is traceable to the lack of one or more of these trace elements. Their deficiencies in soils are not so widespread however, as to warrant their general addition to all fertilizers. When soil deficiencies do exist they can usually be corrected by the addition of small amounts of these elements to commercial fertilizers, or by direct application to the soil. With some of these nutrients the range between beneficial and detrimental amounts is very narrow so they must be carefully used for too much will cause injury and while a little may be beneficial it does not necessarily follow that more will be better.

This article is addressed to gardeners in general and rose growers in particular and we are sorry that space does not permit the discussion of the application of fertilizers to rose feeding but we will plan on providing this in the next Annual.

Editor's note: We wish to gratefully acknowledge the assistance received in the preparation of this article from the Dominion Bureau of Statistics and the Department of Agriculture, Ottawa, Ontario;

also from The National Plant Food Institute, Washington, D.C. through their authorative booklet 'Our Land and Its Care'. We are also greatly indebted to The American Society of Agronomy for information received from the extensive work 'Fertilizer Technology and Resources in the United States' edited by Dr. K. D. Jacob.

District Reports

WESTHOLME — *F. N. Parker*

THE winter of 1960-61 was again very mild and the bushes came through without any winter damage but in April, after the pruning was finished and a lot of new growth had started, we had in some districts a couple of frosts which froze the new growth and damaged some of the canes which were alright at pruning time. The damage did not appear until some time later when blue patches appeared on the canes and later turned brown. They had to be cut back hard and a lot of wood was lost, however this was largely local as the south end of the Island escaped.

We had a very wet spring and since the ground was warm growth started early and the bloom was much earlier than usual. I had hybrid teas in bloom before *R. Cantabrigiensis* which has always been the first bush to bloom. The weather continued cool until the middle of June so the bushes were still carrying good blooms at the time of the shows.

Victoria had to hold their show a week later than usual and many exhibitors were anxious but there were many excellent blooms on the benches and everybody was happy. The hall where the shows have been held for the past few years was no longer available and the curling rink was obtained. This was a great improvement with lots of floor space and ample parking accomodation which the other location lacked. The extra room between the tables allowed people to view the exhibits without crowding and a better arrangement and display of the blooms. The show committee appreciated the extra space available for renting to commercial firms. The show was a great success and what is very important there were several new exhibitors.

The best bloom in the show was a beautiful 'Neville Chamberlain' and I cannot recall having seen this variety staged before. The timing of the show seemed just right for 'Show Girl' and many

specimens of this variety were shown. The award for the second best bloom in the show went to 'Show Girl' which was taken from a novice exhibit. Quite a delightful experience for a person staging their first exhibit.

A booth of old-fashioned roses from Government House attracted a great deal of attention and displayed many varieties that I have not seen for a great many years — some I cannot recall as having ever seen before. A commercial display showed many new as well as older varieties which also attracted a lot of attention both days of the show; the blooms stood up very well.

The hot weather started about the third week in June and from then on it was very hot and dry. Where lots of water was applied the bushes kept blooming although the blooms did not last very long. The floribundas after their first flush of bloom were slow making new growth and where water was scarce they stopped growing or flowering altogether. The fall bloom was poor.

It was a bad year for insects, particularly aphids and red spider. Blackspot which is supposed to thrive in wet weather was really bad and mildew we had all summer. On the other hand rust, which is usually more trouble in hot weather, was lighter than usual. In dry hot weather sprays or dusts seem to harm the foliage more than the pests or disease and in this regard have found that Zineb gives good mildew and rust control with least damage to foliage.

A really heavy sawdust mulch is necessary in a very dry year and I have found that those bushes which have a heavy covering do better than those without a mulch, or where the sawdust is worn thin. It must be applied while moisture is still in the ground.

As usual in the hot dry weather 'Ethel Sandy' was magnificent and it was also a good year for 'Karl Herbst' and for the first time since I have been growing 'Mirandy' the performance was satisfactory. The new 'Wendy Cussons' carried a lot of bloom all season and the reports from various people who have tried this new deep cerise were good. 'My Choice' is another new variety which has done well.

VANCOUVER — *Mollie McLeod*

BY the time this report appears in the 1962 *Annual* it will be almost time to prune the bushes for another year's cycle of bloom. It has

'SABRINA' (H.T.)
Raised by F. Meilland, France
TRIAL GROUND CERTIFICATE AND CERTIFICATE OF MERIT, 1960
Reproduced by kind permission of the National Rose Society of Great Britain

been a good year on the whole, with rather more mildew than usual caused by the extremely wet spring and heavy dews of the summer nights. The mild winter did nothing to control the pest population and black spot reared its ugly head in a number of gardens. Phaltan, when used at regular intervals, and in combination with Isotox, seems to have proved a definite check, if not a complete cure.

The biggest single event of the year was the 12th Annual Rose Show, held on the 21st and 22nd of June. Mr. Harold Faulkner, the show chairman, as well as all the members who worked to make it a success, deserve credit for staging such an excellent show. As I left the hall at noon, just before the judging began, I paused for a last all-over view. It was a sight to gladden any rose lover's heart as every tint and tone known to the rose world blended to make a picture of surpassing beauty. Mr. Bill Livingstone, with his unerring sense of design, provided just the right foil with the Vancouver Park Board's display of beautiful shrubs, foliage plants, and tall blue delphiniums. The commercial displays of roses staged by Mr. Henry Eddie, of Vancouver, and Mr. Jack Petty of Langley Prairie, contributed to the colorama.

Mrs. W. H. Walkinshaw opened the show and our president's wife, Mrs. Fred Blakeney, graciously presented the trophies. There was a unanimous feeling of gladness when Mr. Harold Simpson, the top winner of the show, received the Eddies Nurseries Challenge Trophy and the American Rose Society Gold Medal Certificate for the best rose in the show with his "Show Girl". This lovely bloom also won the National Rose Society's Bronze Medal for the Most Meritorious Exhibit. Mr. Simpson was again called to receive the O. C. Bentley Challenge Trophy for the best show box of six specimen blooms. In his pocket, as he received his rewards, was a plane ticket to England leaving the following day. I think he was already in orbit that night and could have flown non-stop under his own power.

It was like having another birthday for Mrs. E. R. Coan. Her husband had given her six bushes of 'White Queen' for her birthday in the spring and under her loving care they flourished and produced, not only the best white rose in the show but a whole bowl of them, winning the Helen M. Selwood Memorial Trophy for the

best white rose and the Mary G. Fyfe-Smith Memorial Bowl for the best bowl.

One of our real pioneer rose growers was in the winners circle, although that is no novelty for Mr. John Morgan, as he has been winning awards since 1921. The Red Rose Tea and Coffee Challenge Trophy for the best red rose in the 1961 show was won by him as well as the B.C. Electric Challenge Trophy for the best 12 specimen blooms in two vases. It was appropriate that Mr. Morgan should have won the latter trophy as it was with this company that he got his first job when a young man just out from his native Wales. He remained with the same company until his retirement.

Mr. C. D. Yeomans grew the best yellow rose in the show and carried off the Dora Bayon Challenge Trophy for his efforts.

Under Mrs. Don Currie's arm was tucked the H. J. Faulkner Challenge Trophy for the best six specimen blooms in two vases.

Mr. J. W. Horton won the Hudson Bay Challenge Trophy for the best show box of 12 specimen blooms.

The O. B. Allan Challenge Trophy for the best bowl of roses was won by Mr. Arthur McGregor.

In the Novice Class Mr. Mark Stockdale carried off the J. Fyfe-Smith Perpetual Memorial Bowl for the six best blooms, distinct varieties, in the show.

Little Sandra Harvey had stars in her eyes when she received the W. H. Walkinshaw Memorial Trophy from Mrs. Blakeney. This was for the best rose in the childrens' section, which was "Show Girl".

Mrs. Whitely won the Henry Birks Challenge Trophy for the most outstanding decorative arrangement. She chose Michele Meilland roses with wheat and maple leaves for the class, "Man Cannot Live By Bread Alone".

The room in which Mrs. Keith Wiles demonstrated flower arranging was, as in other years, a great source of attraction for the ladies. The men, bless their practical hearts, seemed more interested in how to grow roses and were well rewarded for the half hour spent looking at the educational films sponsored by Ortho

Agricultural Chemicals Ltd. with Mr. Bob Murdoch commentating. But don't let that "practical" image fool you, for men are expert at arranging flowers too, as was proven by the very smart arrangements in the "For Men Only" class.

This report would be far from complete without mentioning the non-competitive display arranged by Mrs. M. E. Matthews of roses grown in her garden. She might have called it, "Roses of Yesterday and Today", for in the exhibit were a number of the newest roses, 'Elsa Arnot', 'Hawaii', 'Nobility', 'Pink Parfait', and 'Garden Party', being a few of the names that come to mind, and turning the pages back to the old fashioned roses such names as: 'Henry Prichard', a hybrid perpetual, 'La Reine Victoria', 'Maiden's Blush' (that one must have been named a good many years ago), 'Delicata', and 'Egleneria', brought back happy memories to many. Mrs. Matthews has been a top winner at Vancouver rose shows over the years but as one of the judges in the 1961 show she was unable to compete so it was a very generous thought of hers to spend the time on such an interesting and educational display.

Mr. John Morgan also had a non-competitive exhibit of roses grown in his garden and Mr. J. D. Wilson, of Bainbridge Island, Washington, drove up for our show bringing with him about a dozen 'Peace' roses which looked like peonies, so full and frilled were the petals.

Before concluding this report on last year's Vancouver Rose Show I would like to pass on the consensus of opinion of the judges. Several of them feel that the over-all quality of bloom could have been better. It is not good enough to have a few outstanding blooms and a lot of second rate ones. Perhaps lots of bloom fill up the benches but as one of the judges put it, "Nobody should enter a rose unless that rose has been grown and cared for with the express purpose of exhibiting it, special attention being given to it from the time it is pruned to the time it is placed on the show bench." Another of the judges noticed residue from spray on some of the entries. Vancouver has proven herself capable of growing top quality roses but inattention to good grooming can mar even the best rose.

A number of members from the Vancouver Rose Society attended the Victoria Horticultural Show on June 23 and 24. There were 35

classes for roses in the show and although the committee complained of the heat we thought their roses were standing up very well, especially as it was the second day. The arrangements in the Artistic Arrangement Class, although not confined to roses, were some of the most beautiful and original floral designs that I have seen. After we had enjoyed the show we drove out to see the rose gardens at Government House. The Olympic Mountains were at their bluest matched by the sparkling blue Pacific — what a backdrop for the rainbow hues of hundreds of rose bushes.

Our membership has been well represented on the prize list of the rose shows at the P.N.E. and the Vancouver Horticultural Society this summer. Several of our members attended the show at Mission City and Chilliwack and gave very favorable reports on the quality of rose bloom.

The programme and educational committees have been active throughout the year organizing a number of informative talks on rose growing, insecticides, and fertilizers, as well as the showing of a number of coloured slides. The library has had a number of new books added to its list and affords the members an excellent source of information on many subjects.

A good crowd attended the March pruning demonstrations held in Stanley Park and 23 new members were enrolled. A total of 61 new members have joined our society during 1961.

The Annual Garden Party was held in the lovely rose garden of Mr. and Mrs. Preston Sharpe. This year it was, "Match Your Wits Against the Experts", the idea being to see how near you could come to judging a rose like Mrs. G. C. Faulkner and Mr. Archie Selwood can judge a rose. Each member brought several blooms, some good and some not so good. These were judged by the experts then papers were given to the members so they could point score. Well, the outcome was a bit garbled but we all felt that we had earned our tea.

Already there is talk abroad of our 1962 Annual Rose Show. This year the Vancouver Rose Society will play host to the American Rose Society's Pacific Northwest District Convention. This will embrace Oregon, Washington, Western Montana, Idaho, and British Columbia. Mr. Wm. Brandner will act as show chairman.

The Kerrisdale Arena has been obtained for the show to ensure not only sufficient space for the expected rose entries, but also because the Arena has means of cooling the building, which will do much to enable the exhibits to stand up in good condition for the two-day show.

Our past president, Mr. Fred Blakeney and Mrs. Blakeney have bought a house near Victoria, B.C. and will be leaving in the near future for their new home. They will indeed be missed by the members of the Vancouver Rose Society but as Victoria is not so very far away they will always have Vancouver friends dropping in to say, "Hello." Mr. Blakeney has given generously of his time and talents to our society through the years and is well known for his knowledge in propagating roses from seed which he has built into a fascinating hobby.

NORTH - CENTRAL SASKATCHEWAN —
Gary Essar, Kindersley

THIS year our main problem could be summed up in one word — drought. Last spring we had next to no run-off. This, coupled with no rain last summer and temperatures in the high nineties most of the time, meant an exceptionally disheartening summer for most prairie rose growers.

Because of the lack of snow in the last few years most of the sloughs which at one time covered many square miles of land have now dried up. Thus watering town gardens has been discontinued in most areas of the province. Fortunately here at Kindersley we were able to pail water from the tap so my roses didn't go without water entirely. The bushes seemed to make good growth even in the hottest weather as long as they were well irrigated. The flowers, of course, suffered most. It was pitiful to see such beautiful buds turn brown around the edges and open into blooms with burnt, crippled petals.

Our shrub roses made a first-rate showing last spring. They were completely covered with colour for three or four weeks. Unfortunately the hot summer weather had an adverse effect on the everbloomers such as 'Hansa'. During July and August there was no growth and thus no blooms.

Last year I tried the heeling-in method of winter protection and I have come to the conclusion that it is the most suitable for this area. It takes far less time and work. All the bushes were dug up and placed in a pit, then covered with soil. I found a thick covering of straw gave good results. I think its greatest merit is that the bushes lose only a minimum of wood. The hilling method is bound to leave some of the largest and tallest canes exposed and thus they are lost, but with this method they are covered and saved. Granted, there are a lot of roots lost which does set them back but it is better to have a plant than a stump. Mouse protection is also gained. In the spring the bushes came through in A-1 condition and got off to an early start. I feel early start is important in a region where our wettest season is in the spring. With this method I had the earliest blooms (about June 3) of any of the methods I have tried.

Our first frosts came in the middle of September. All new growth was stopped and the bushes had a long time to ripen up before covering. I think this will get them off to a very good start next spring. We rose growers on the prairies are looking forward to a better year next year.

MANITOBA — *Mrs. W. M. MacDonald, Winnipeg*

A CLOSE look at our gardening and weather notes for the past year makes us realize once more the general hardiness of roses. They seem to have the "will to survive" in spite of adverse conditions; and we had our share of those this year. In many areas it was felt that the snowfall was insufficient, and then we had weeks without rain.

We had an average spring, with the weather moderating during the day and temperatures going down to freezing at night. The majority of our members seemed to feel that losses from winter weather were low; and we looked forward to a good season. Then, from the second week of April until mid-July we had a period of drought. The month of June was the sunniest and driest on record. Rainfall for the month was .3 inches (normal 2.64 ins.) and we had 370.4 hours of sunshine (normal 248.4 hours). Fortunately, water-rationing was not necessary this year and, in the cities, we kept our hoses working constantly. The resultant excess water bills were a bit of a shock but, when the lives of our roses were at stake, who

cared? In the country areas people had to carry water in many instances, and the time and labour involved must have been terrific. It was a red-letter day when, on July 12th, the rain came. It takes a drought to make us appreciate a rainfall, and many people stood outdoors just to enjoy the smell of the damp earth and the feel of the rain-drops on their faces. Perhaps all this will make you feel that we are much preoccupied with our weather, but that goes with gardening, doesn't it?

In spite of everything the roses survived and bloomed; we cannot say that they all "flourished" exactly. For a while they seemed to make no progress, and many reports indicate that the bushes were stunted as compared with other years. The excessive heat and dryness played havoc with the blooms — they passed from bud stage to open blooms and were wilted, all in a matter of hours. Some growers said that established roses endured the drought while newly-planted bushes were casualties. Contrary to this, the writer imported a number of roses from Wheatcroft this spring, and these new bushes produced as much growth and bloom as the established roses in the garden. Of course, the understock may have something to do with this — Wheatcroft roses could be on either *R. laxa* or on *R. canina* stock. Reports on the season are conflicting, even from rosarians living in the same area; we will try to create an over-all picture by giving excerpts from several different districts.

In Winnipeg we obtained some interesting notes from Mr. Hector Macdonald, the Superintendent of Assiniboine Park; he is always ready with assistance, facts and figures. We have spoken of his method of winter protection before (1960 Rose Annual) and he says that the same procedure proved satisfactory for the winter of 1960-61. His winter loss was below average. In the spring he made some new plantings but, probably because of the extreme heat and dry winds, the newly-planted bushes did not thrive — about 30% failed to grow. The established roses had one of their best years, in spite of the drought. Mr. Macdonald tells us that the growth was above average and the blooms better than usual, both in quality and quantity. Perhaps we should add a P.S. to this success story: In the Park there is a Zoo and, when the buffalo pasture was cleaned up last Fall, the resourceful Scot had the material placed in a spot where it could dry out — without rotting — until spring.

Before the hot weather arrived the pile was worked over with a roto-tiller and the resulting mixture was placed as a dry mulch around the roses, to a depth of about one inch. Of course, the immediate result was a crop of alfalfa seedlings which had to be removed; but after that the roses made excellent progress. Incidentally, the same mulch was applied in the begonia beds with marvellous results.

The dry weather had one compensation — there was very little disease and very little insect damage this summer. According to reports, this seems to be fairly general in the Winnipeg area and in some country points, with a few exceptions.

From Treesbank, about 126 miles south-west of Winnipeg, Mr. Harry Vane sends in his usual comprehensive report. In that area gardens and crops suffered greatly from the drought. Mr. Vane has probably been growing roses as long as anyone in the province, and he says this was the worst year he has ever had; the bushes were stunted and the blooms did not last. He makes no secret of his age so we feel free to say that he is about 88 years old; nevertheless, he carried the necessary buckets of water to his roses and, as he has a large number, this was no small task. He feels that, after such a summer, the bushes are not in the best condition to withstand the coming winter.

We had a very interesting letter from Mr. H. D. Sparling, of Portage la Prairie. He is another veteran rosarian and we were very glad to receive his evaluation of the past season. Portage is about 60 miles west of Winnipeg, and that area often has more snow than we here. Mr. Sparling reports that his winter casualties were almost nil; but this is usual with him. He does not complain of the effect of the drought on his roses but notes, of course, that much watering and more mulching were necessary. He adds, too, that the blooms on the bushes did not last. He had no trouble with blackspot, partly on account of the dry weather, but he also maintains an extensive spraying programme for this; he uses Captan. There was, however, a heavy infestation of aphids and red spider mites in his garden and orchard, and this required the continuous use of Malathion.

We hear next from Flin Flon, 550 miles north of Winnipeg. Mr. Grindle, our member up there, was quite cheerful about the

hot, dry season. Of course, Flin Flon is in the lake country, and the water supply is plentiful so the gardens did not suffer too much. Mr. Grindle can gather and dry his own peat moss; and he uses it freely for mulch in the summer and for protection in the winter. His final step at freeze-up is to place cartons over the roses. Flin Flon has an annual Horticultural Show but it is usually in the latter part of August when most roses are past the peak of bloom. At present, there are not too many exhibits in the rose classes; our member would like to see more competition. He is growing roses on both *R. canina* and *R. multiflora* understock, but wished to defer an opinion until next year.

Now a brief note about our Shows. As usual the Red River Exhibition was held in June. Owing to the dry weather we were not too hopeful for our rose classes, but we were quite pleasantly surprised. The number of exhibits was fairly large. However, the blooms were generally somewhat smaller than usual, and the quality not quite so good. This applies also to the exhibits at our Annual Outdoor Rose Show, held in July, but this was to be expected — we had had our first real rain of the summer only a week before the Show.

For the International Flower Show in August we had a larger number of entries, many of them of good quality. In addition to the regular exhibits for competition, we set up an "educational display" to enable those interested in roses — particularly beginners — to recognize the different varieties. We arranged our roses on tiered shelves, and each specimen was clearly labelled. We had a large number of locally-grown bloms; we also received a magnificent gift of 33 different varieties, four blooms of each, which came from our good friends at Eddie's Nursery. These were a valuable addition to the display as many of the newer roses were included — 'Rose Gaujard', 'Tanya', Beauté', the 1961 ARS award 'Duet', and so on. We noted that many spectators were taking notes as they looked over the roses.

We had our Fall meeting in October. For this we borrowed a film "Living with Roses" from the Ortho Agricultural Chemical Company. This film is beautiful and instructive, showing the creation of a rose garden from start to completion and touching on

the many aspects of cultivation. After the film the meeting was open for questions which were answered by a panel.

Our other local societies may be interested to know that Ortho expects to have available in Canada shortly a film of the Floriade which was held in Rotterdam in 1960. It is a film of the whole Exhibition but, having personally seen the large rosarium there, we are confident that the roses will be given prominence. In any event, we have put in an application for the early loan of this film.

In conclusion we wish to express our thanks for the assistance given us by so many rosarians, and particularly by Messrs. Grindle, Macdonald, Sparling and Vane. Our report would be of little value without their contributions.

From Region Three we say "Au revoir" and offer our best wishes for a successful rose year in 1962.

LAKEHEAD AREA — *H. C. Westbrook, Port Arthur*

THE writer must apologize for the lack of variety in the reports from this region. The fact is paramount however, that the area is small and confined definitely to the shores of Thunder Bay on Lake Superior. Further inland, the earlier frosts and later springs do not give much growing season.

The winter of 1960-61 was as near snowless as this region is likely to ever see, only 23 inches of snow to the end of January. To all intents and purposes the snow on the rose beds was gone by April 3. During most of the winter many of the beds were practically clear of snow. Despite this meagre covering and a very cold latter half of January, the bushes came through their ordeal amazingly well. The only losses suffered were those which had been badly rusted in 1960; 'Ethel Sanday' failed to survive.

The removal of the straw which covered the earth mounds, was started on April 3, and finished about April 19, when it was all finally thawed. The earth mounds were completely removed by April 23. The planting was started and spasmodically carried on until May 18. On the two nights previous to this date the temperature dropped to 22°F. No wonder some of the bushes were slowed down!

It was just a fair year as far as the quality of blooms were concerned. From the winter's observations the red roses did not do well. This may be heresy, but as far as my garden is concerned both 'Ena Harkness' and 'Crimson Glory' have retrogressed steadily each year, which may have something to do with this observation. Consequently, both these varieties are gradually being banished. The only older red which did well was 'Karl Herbst' — it surpassed itself.

Some newcomers who showed promise were 'Christian Dior' (it can be magnificent), 'Wendy Cussons' (almost too good to be true), 'Lady Zia' and 'Piccadilly'. These four should be around for a long time.

The pink roses were, naturally, tops with 'Emily' leading the parade, as usual; but hard pushed by 'Pink Spiral' which had a superb year.

The writer came across an old-timer, but new to him, 'Mme Charles Sauvage', which can be recommended as a great yellow bedder, always in flower — well worth trying and can be obtained in Canada.

The Port Arthur Rose Show was again this year a great success and attracted many visitors including tourists who said they did not believe it. The date of the show was just between the best time for the late gardens and that of the early ones, and so the entry list was a bit smaller — 28 competitors and 236 specimen blooms. This, of course, does not include decorative classes and vases or baskets of roses. 'Pink Spiral' won the *Rose of Show* and it was a magnificent bloom as near perfection as 'Pink Spiral' can ever hope to achieve. 'Burnaby' won the *Reserve Champion* and 'Emily' the *Parish Memorial Prize.*

The insects did not really exist. A few aphids showed up for the feast, but ended up providing one for the energetic "Lady Bugs" who moved in. Spraying was not really necessary. Blackspot was not seen. A couple of growers asked the writer to check on this in their gardens and the infection was only purple spotting. Rust was not so bad as last year — it couldn't be — but was there. An imported preventive spray was used, but whether this was effective or not is a matter of opinion as no control plot was used. The bushes hardest hit by rust were 'Bacchus', 'Emily', 'Virgo', 'Dorothy

Anderson' and 'Perfecta'. 'Ballet' had it badly two years ago, but has not had it since. Immunization?

'Fashion' again got a touch of rust, but contrary to all the gloomy prognostications, simply shook it off and did beautifully.

Tried burying some floribundas and climbers last fall for winter protection. Not worth the trouble — some hardly recovered from the ordeal — noticeably 'Doris Norman' and 'Shepherd's Delight'. The climbers didn't do one whit better than when left in their places and were frozen back to the earth mounds. Excluding 'Brownell's No. 82', 'New Dawn' and to some extent 'Blaze' this group is absolutely not worth the time, effort and space it takes — in this area. There was one interesting facet of this burying, however. A branch was found in the bundle of buried roses which had broken from its plant. It had begun to develop hair roots and "just for laughs" was planted. Now I have a new healthy 'Frensham' bush that flowered well.

The killing frosts hit about September 20th, when the mercury dipped to the low 20's on two successive nights. Except for a few floribundas the bushes have "had it". Consequently, they are going to be "put to bed" October 21. I hope they have a good refreshing sleep and wake up early — "raring to go".

KIRKLAND LAKE — *Mrs. F. Daugherty*

OUR town is another gold-mining centre situated in Northern Ontario not far from the Quebec border. Due to our sub-zero temperatures winter losses are heavy but notwithstanding this problem more and more people in the area are starting to grow roses. The temperature takes its toll but we find that losses are increased by uncovering too early or too quickly in the spring, as the freezing and thawing are more harmful than the heavy cold weather.

Due to weather conditions in our area insect damage was heavy this past season but we try to offset this trouble by keeping our bushes as healthy and vigorous as possible. Proper feeding is helpful and we apply bonemeal and Vigoro Rose Food to the soil early in the spring. Care must be taken that their use, like all other fertilizers, are not continued too late in the season. We discontinue our feeding by late spring or early summer.

Our Horticultural Society held their Annual Flower Show on August 23rd and there was a good display of roses. 'Peace 'carried off the special prize again this year.

Amongst the Hybrid Teas with which we have most success would be 'Peace', Crimson Glory' and 'Frau Karl Druschki' — the latter having been known to winter 10 years. Of the grandifloras 'Queen Elizabeth' is outstanding and probably 'Donald Prior' and 'Fashion' are the best floribundas although the latter does fade somewhat in our short bright summers. The grandifloras and floribundas winter very well, along with the hybrid teas, providing they are given special care and hilled with eight to twelve inches of soil — this is also recommended when planting new bushes in the spring.

Some attempt is made to grow climbing roses but they are not hardy enough to get through the winter and their planting is not recommended.

BARRIE — *Russ McLaren*

THE new city of Barrie, a community of some 21,000, has adopted the ROSE as the civic flower and to commemorate the occasion our local parks board planted three large beds of roses in the center of the city at the new Memorial Park. The Barrie Horticultural Society with a membership of almost 1,000 members is a very progressive association of gardeners and it was largely through their influence that such special recognition of the rose was made.

Our Annual Rose Show was held on July 12th and we were very pleased to have Mr. W. J. Keenan of The Canadian Rose Society judge the show. We had 119 entries staged by 22 exhibitors and the award for the best rose in the show went to 'Kordes Perfecta'. Mr. Keenan commented very favourably on the quality of this particular specimen and the many other lovely blooms in the show.

In talking to other rosarians in the district I find that as a whole the roses came through last winter very well with the exception of the climbers. Those that did survive were very slow in growth and did not fully recover until the fall and of course without any bloom.

One of the newer roses that I grew this past summer was the beautiful dark red grandiflora 'John S. Armstrong' an All America

Rose Selection (AARS) winner for 1962. As a cut flower it will remain in perfect condition for 10 days.

We are great lovers of standard roses and have done considerable experimenting over the past few years to find a way to winter them in our rather severe weather without digging a hole in the lawn to bury them. We have had some success by having an oak barrel cut through the center to make two containers and the standard roses planted in these containers using a mixture of soil, leaf mould, manure, peat moss, and charcoal. After the second frost in the fall they are moved into the garage for the winter months where we are able to maintain a temperature of 35 to 50°F. This past summer they had as many as 60 blooms at one time and were still blooming when the first frost hit. They are now in the garage again for the third season.

As for the rose growing season of 1961 roses were perfect up until the end of July, but in August and September I had more powdery mildew and blackspot than I have encountered since starting to grow roses. By continual spraying, dusting, and the picking of diseased leaves two or three times a week, the foliage finally cleared up and on November 15th we picked two dozen lovely blooms from the garden.

Editor's Note: Mr. and Mrs. McLaren won many of the prizes at the summer show and the beautiful specimen of 'Kordes Perfecta' that won the best of show award, came from their garden.

WINDSOR — *Emerson Mitchell*

WE are accustomed to having long pleasant autumns down here and 1960 was no exception. On December 5th the thermometer registered 67°F. and having some roses that were received in a shipment from Europe a few weeks previous, that had been trenched for the winter, we couldn't withstand the urge to dig them up and start planting. The soil was in excellent condition and of course the plants after being buried were in splendid shape.

A mild autumn is always welcome but when it extends into the winter months it doesn't give the plants the opportunity to become ripened for the wintry blasts that are bound to follow which results in plenty of damage. It used to be said that the alternate freezing

and thawing in the spring caused the most damage but it has been our experience that when the wood is not hardened off in the fall before a sudden severe drop in temperature the resulting damage is always heavy.

The winter of 1960-61 might be considered mild with two exceptions. We had some moderately cold weather in mid-December then on December 20th the temperature took a sudden dip to 7° below zero when the plants weren't in condition to take it. In mid-January we had the last severe cold of the winter when it again went to 7° below. February was comparatively mild and as most always follows a mild February we had a long cool spring. It was to be observed that there had been considerable damage caused by the two sudden drops in December and January resulting in many hybrid teas being cut back to the ground cover.

There was slow but strong growth in the spring and many had 18″ shoots when on June 1st the heaviest hail storm in the memory of old-timers struck. It followed a course along the Detroit River doing the most damage in a mile strip inland. After viewing the storm and the ground afterwards covered with hail stones, some the size of golf balls, from indoors I couldn't muster the courage to go outside and make a survey of the damage until the next morning. When I did go out it was a very great relief to find aside from torn and perforated foliage, there was little damage to the canes much less than had been anticipated.

Several gardens located closer to the river were visited and the damage was appalling, the plants were stripped of foliage and a large proportion of the new canes with buds were strewn about the ground. When I returned to look our garden over again after seeing such damage in the others I was truly thankful that we had such a miraculous escape.

The first few weeks of June were cool but the plants continued to put on good strong growth and the peak of the bloom was reached the weekend of June 17-18, a week later than usual, with the quality excellent.

The rose midge came back in July and had done considerable harm before it was noticed but I set in immediately with the D.D.T. treatment to ground and plants, besides cutting off and destroying

all injured shoots and buds, before it was licked in two weeks. Two large gardens I visited had heavy infestation that hadn't been detected but after the D.D.T. treatment they were soon rid of it.

During August and September the garden didn't require much watering as there was exceptional rainfall which meant good growth. With mild and sunny weather in October we had bloom of size and quality that surpassed the earlier bloom. Some of the climbing hybrid teas were outstanding. Of the new plantings, 'Piccadilly' in the hybrid teas is very colourful with a good plant; 'Dearest' was away ahead in the floribundas, the buds tightly furled, and the lovely bright pink fragrant bloom is sure to make it sought after by the ladies. Clg. Gail Borden' with its large dark shiny foliage, great size, pleasing colour and generous blooming will be welcomed wherever this type can be grown.

Beds of 'Gold Crown' and 'Dame de Couer' planted at the Windsor Utilities Rose Garden in the fall of 1960 gave a good account of themselves and this fall beds were planted of 'Piccadilly' and 'Fritz Thiedemann' which were shipped by air from Europe on October 25th arriving in Windsor the next day. It is a rather expensive means of shipping nursery stock but when one sees the fine condition of the plants on arrival it compensates a good deal.

Now we are into November, the hybrid teas and floribundas have been top-trimmed; the climbers tied in and all have been banked with loam and given the usual dressing of agricultural lime which has been found beneficial in improving the texture of the soil, imparting that important element calcium and being unlike hydrated lime hasn't had any appreciable effect on the *ph* balance.

Several plants have been removed and the beds rearranged this fall when this work is best done to provide space for the young hopefuls that have been trenched and we anticipate will not let our enthusiasm down when spring rolls around. We couldn't wish for more in 1962 than the great pleasure that was derived from the display they put on in 1961.

INGERSOLL — *Fred J. George*

"ROSES and pretty girls certainly go together — especially in the month of June" stated Mr. E. Garner warden of Oxford County

while crowning the first Queen of Oxford County's first Annual Festival of Roses held in Ingersoll this past June.

To create public interest and enthusiasm, and a good attendance at our Festival, we decided to hold a parade to herald the opening of our Festival in the afternoon. Led by a prancing trick horse, pipe band, brass band, majorettes, decorated cars, the main body of the parade consisted of beautifully decorated floats. Each float carried exquisitely gowned girls contesting the honour of being chosen the Queen of the County Festival and as each of the Queen contestants represented one of the various township Junior Farmers Clubs the interest drew many people from the town and county to the parade route and eventually to the auditorium and our show.

Arriving at the auditorium each exhibitor was greeted with a hubbub of excitement and activity but all too soon a sudden silence creeps over the hall as the judges start their slow movement through the exhibits, and after a few tense moments the coloured ribbons proclaim the winning entries. To the true rose grower the thrill of winning is secondary to the satisfaction he finds in knowing that from year to year he is coming closer to perfection in the growing of roses.

The Best Rose in the Show award was won by Francis Moulton of Verschoyle with a beautiful specimen of 'Nigger Boy'. This hybrid tea is not widely grown and is a very deep velvety maroon with black shadings; strongly fragrant and free-flowering. The runner-up was a beautiful long-stemmed specimen of the pure white 'Virgo' staged by the writer. Unfortunately space does not permit a more extensive coverage of the show but had the weather been more favourable previous to the show our Festival would have been short of space.

The crowning of the Queen and the presentation of the silverware awards drew a good crowd again in the evening. The Festival remained open through Sunday for viewing and assisted by a very prominent television programme many came to see the exhibits from as far as 50 miles. From beginning to end our endeavour enjoyed the wonderful co-operation of members, prize and trophy donors, and the general public.

Our 1960-61 winter was a little unusual as we had very little snow, very mild weather with an over-abundance of sunshine. Rose growers were worried lest this unusually good weather would have an adverse effect on the wintering roses. As the winter protection was removed it was evident that most of the top growth had been killed back to the ground. In many instances the bushes were written off as dead and new bushes added but with a very late cold spring this replacement was late. To our surprise many bushes that appeared dead suddenly sprang to life with the advent of warm favorable weather. I am certain that many bushes discarded as dead in the spring are very much alive and only need the warmth of spring to renew their life.

Some of the finest roses imaginable were produced on these seemingly dead bushes and the late blooms took about 95 per cent of the prizes at the London Fair this fall. This emphasizes the extraordinary recuperative powers of the rose and they should not be hastily discarded after a severe winter as many will send up strong new growth from dormant eyes at the point of union.

Never has there been so few aphids and the only explanation we can give was that since our spring was blessed with many little showers the aphids were kept from rising. While spring growth was late in getting started the favorable summer weather produced heavy growth with very little disease. Beds receiving but the minimum amount of care have been almost completely free of blackspot and mildew. Many gardens showed the ravages of the rose leaf hopper. This insect is very small and active and since it is a sucking species it has to be destroyed by a contact insecticide which is difficult as they move out of range with lightning speed when disturbed. They do not operate in great numbers at one point as they attack the underside of the leaves, sucking the sap and leaving them dry and grey in appearance. For some unknown reason the leaf cutting bee was very active this fall and those little round holes spoiled many a specimen worthy of a prize at the fall fairs. Our pest problems are not unlike those reported from other districts and our control measures are about identical with those already reported.

At date of writing, November 17th, we experienced our first killing frost and on the following day we had a 5½ inch fall of snow. Winter struck hard before growth had ceased and in fact

before many bushes had finished blooming and certainly long before any but a few of the more cautious had given much thought to winter protection. Mounding with clean soil around each bush is the basis of our winter protection which will be an important topic of conversation amongst us all until we get a break in the weather and a few hours to protect our roses which are in full leaf and covered with buds.

The ability of the rose to survive is a miracle and I feel certain that when June comes around again we will once more be overwhelmed with their magnificent beauty and charm.

ST. CATHARINES — *Alfred A. Miles*

THIS has been a year of achievement in this district. Late in March five of the local members of The Canadian Rose Society met with a few of their rose loving friends for an informal talk and discussion of our favourite flower. Out of this meeting, which was held at the home of the Regional Director, came the decision to form The St. Catharines and District Rose Society and officers and directors were selected for the 1961 term.

Two weeks later the first regular meeting of the new society was held at the home of the Secretary when a slide show was put on by the Regional Director who talked briefly on winter hardiness of roses and the aims of the society. The attendance was twenty nine and nine new members joined The Canadian Rose Society.

The rapidly growing Society now required a public hall to accomodate the meetings and we were able to obtain the "Blue Flame Room" of the Provincial Gas Company. For our first open meeting Mr. W. J. Keenan came over from Toronto with Mr. C. Davis and Mr. G. S. Flagler and gave us a very interesting talk and slide show on "Rose Growing". Later this group was joined by our own Mr. M. Bowes and the writer acted as moderator of a panel to answer questions on rose growing problems. These talks and discussions coming as they did in May were timely and very helpful.

In June a very fine horticultural show was sponsored by The St. Catharines Arts Council and held in Rodman Hall; the theme was "Down the Garden Path" and our society decorated a rather

large room with non-competitive rose arrangements. An open class competition of three blooms or sprays, any variety, was held and judged by Miss M. E. Dove of Toronto. The Canadian Rose Society silver medal went to Miss Anne Cawley for an outstanding display of the lovely rose-pink floribunda 'Else Poulsen'.

On Sunday June 25th Mrs. Miles and myself were very pleased to hold open garden on behalf of the Society and the large attendance of local and out of town visitors indicated the wide-spread interest in the rose in this area. Amongst the many varieties on display 'Baby Masquerade', 'Nevada', 'Mme. Hardy' and 'Variegata di Bologna' seemed to receive the greatest acclaim.

During July we enjoyed the hospitality of the Vineland Experimental Station with Dr. H. Upshall acting as host. An interesting tour of the gardens followed by a slide show and talk on "Flowers from Bermuda to British Columbia" was greatly enjoyed.

The October meeting brought together a panel of speakers including Dr. H. Upshall, Mr. P. Martindale, Mr. M. Bowes and the writer the subject being "Joys and Heartaches, Roses 1961" and then to close the season in November we were treated to a talk on "Newer Rose Varieties" by Mr. D. Bakker of J. C. Bakker & Sons Nursery.

In taking a survey of our first season's progress we find that we have fifty five charter members of which thirty nine are members of The Canadian Rose Society. We are looking forward to a bigger and better year in 1962. Our new executive will soon start to prepare our Constitution and make plans for future development and the success we have had this first year has confirmed our feeling that a rose society was needed in this community.

If you want to enjoy your hobby of rose culture to the full, form your own community rose society and share your experiences and pleasures with your fellow rose enthusiasts.

PETERBOROUGH — *Margaret A. Heideman*

THIS area last year had a very mild autumn followed by deep cold, fifteen to twenty degrees below zero in January and February, with no snow on the ground, and a long, cold, wet, seemingly-endless

spring. Some gardeners in the area lost all their roses, and most lost a considerable number. The writer lost very few, in spite of the fact that the roses had not been hilled up or even protected with leaves. Perhaps these roses were saved by having been planted with the graft deeper than the recommended two inches, for most hybrid teas are ordinarily killed back almost to the ground in this area where the winter temperature often goes to thirty below. For many years now my roses have not been hilled up, but the deep summer mulch of peat moss has been left intact and the beds have been, except for last year, filled up with maple leaves.

When the roses finally did begin to grow last spring, we had to be very patient in this area since many bushes that had survived were very slow in showing signs of growth. Many plants that were dug out because they appeared dead were hastily replanted when healthy sprouts were found on the graft below soil level. The writer had the unusual experience of observing two beautiful copper blooms on a fifteen-year-old plant of 'Mrs. Sam McGredy' which showed absolutely no signs of life until the first week in August.

However, in spite of the dismal weather and the necessity of postponement until early July, the Peterborough Rose Show was a much greater success than we had expected, for many beautiful roses miraculously appeared. The Show took place in the Imperial Ballroom of the Empress Hotel, and, while the judging was in progress during the early part of the evening, a panel discussion on rose culture took place in an adjoining room before a large and keenly-interested audience. This discussion on roses during the judging period has been a tradition with the Peterborough Rose Show since Mr. O. C. Bentley and Mr. C. R. Stephenson came to judge our rose shows in the early fifties. These devoted rosarians and the equally devoted secretary of the Peterborough Horticultural Society, Mr. W. C. Wilks, have provided much of the impetus that has carried the shows up to the present.

The 1961 Rose Show was one of the highlights of the Centennial Year of the Peterborough Horticultural Society and had been heralded by two programmes entirely devoted to roses during the winter season; and the distribution by the Society of more than three hundred Canadian-grown rose bushes as membership premiums.

The following awards were won at the Rose Show and presented at the October meeting of the Horticultural Society:

The Canadian Rose Society Bronze Medal went to Mrs. George Wilson for the best rose in the show, a 'Crimson Glory'. Mrs. Wilson also won the W. G. Hancock award for the most points in the show and the Red Rose Tea Trophy for the best red rose. Mr. Oliver Mappin won the CRS Silver Medal as runner-up. The Canadian Oil Company Silver Tray went to Mr. W. J. Thompson for the best white rose. Miss Roseanne Wilson was awarded the H. L. Beal Trophy for the best six roses. A Bronze Medal of the National Rose Society of England was presented to Mrs. A. H. Heideman for a display of varieties of old-fashioned and hybrid tea roses.

Rose-growers in this area have taken special interest and pleasure in a gift made to the public by an enthusiastic member of the Peterborough Horticultural Society, Mr. W. J. Hancock, who conceived the idea of a rose garden in the grounds of the Peterborough Civic Hospital. Mr. Hancock supervised the selection and planting of several hundred roses, including standards, and the garden, which was opened in July, has been a great source of interest and pleasure to visitors at the hospital. Since this season ended much better than it had begun, these roses were in brilliant bloom at the end of October. This kind of gift, it seems to me, is one of special value and delight, for, in most parts of Canada, there are far too few opportunities for the public to enjoy one of the finest of all pleasures, that of lingering in an artistically-designed garden made available for anyone who wants to enjoy its beauty or to sit outdoors in peace for a while.

OTTAWA — *W. M. Cavaye*

THE enthusiasm shown by many people when a rose show is featured, or when roses are on display in any public garden, indicates that interest in roses is still strong; but the number of actual rose-growers, who grow more than a few of the genus *Rosa* has decreased rather than increased in this area, perhaps primarily because of the hardiness factor.

Spring sales here indicate that many people still like to grow a few roses and if only every buyer could be persuaded to give the purchased plants the proper care and culture, with emphasis on winter

protection, then, assuredly we could maintain the interest in growing roses, which is obviously already there.

While there is a nucleus of enthusiasts who grow the aristocrats of the rose world; hybrid teas such as 'Crimson Glory', 'Peace', 'Ena Harkness', 'Picture', 'Dr. F. Debat', 'Comtesse Vandal', 'Tiffany', 'Chrysler Imperial' and others of their court, I think that to engender interest in new gardeners, we should persuade them to grow some of the roses of more plebeian temperament first and later let them graduate into contact with the 'blue bloods' of the rose family.

The increased sale this spring of floribunda, grandiflora, miniature and the pillar-climber type roses like 'Aloha' gives indication that gardeners are looking for roses which are adaptable for bedding as well as for good blooms and for plants which are adaptable to smaller gardens and smaller wall spaces, which now prevail with smaller lots and low-walled bungalow and ranch style homes.

The spring of 1961 developed slowly and warm weather was slow in settling; in consequence there were fears of heavy losses because of slow growth development and because snow coverage had not been heavy through the winter of 1960-61. Except in wind-swept areas or where no protection had been given, most of the roses came through after heavy pruning, except with the hybrid teas, which again had a number of casualties. Insulation with snow in this area is so erratic that some growers of hybrid teas are again resorting to digging the plants up and burying them in a shallow pit in a well-drained area of the garden. This certainly assures retention of live wood for the spring, when they may be replanted.

The blooming season has been long and satisfactory this year and there has been much vigorous growth and good foliage. There has been little black spot in evidence but overhead watering at the wrong time has caused some mildew, which has been controlled fairly well with Karathane; though burning of the foliage has occurred when spraying has been done during high temperature periods — perhaps we will eventually learn to keep water off the leaves.

Rose growers are hopeful that a safe and effective systemic insecticide will be developed and marketed in the not-too-distant future so that better protection may be given roses from the depredations of insects. I have been using Meta-systox in a small way on my roses

throughout this summer and have had very good control. I am still not sure, however, that the public is sufficiently educated to the dangers of systemic insecticides to warrant prudence in their use.

The Ottawa Horticultural Society invited the public to join them to hear from Mr. R. Warren Oliver, of the Plant Research Institute, Canada Department of Agriculture, speak on the subject — 'Why Don't You Grow Roses?' This took place in March and stimulated a number of cultural questions. The rose classes in two of the Society's Annual Shows brought in a few more entries than in immediate past years but rose growers do not seem as anxious to show their good blooms as they were wont to do in what we sometimes call — 'the good old days'. A umber of local gardeners paid their annual visit to the Jackson and Perkins Trial Gardens in Newark, N.Y. last June, as they do most years, which confirms the feeling that regard for the 'Queen of Flowers' is still very high.

MONTREAL DISTRICT — *E. B. Jubien, W. G. Borland, and H. C. Cross*

YOUR Regional Directors would like to report that 1961 was a very successful year for rose growers in the Montreal area.

During the winter months, two meetings were held in the Town of Mount Royal and Baie d'Urfe. These meetings took the form of a panel discussion with the Regional Directors acting as members of the panel. Each director discussed some phase of rose growing and in this manner a good deal of information was reviewed. A good question period followed and members of the audience appeared to be very much interested. Attendance was about 60 in each case which your directors feel was very good. These meetings were sponsored in both cases by the local Horticultural Societies as part of their winter programme.

Our spring was very late this year, so much so that some of the early growth of rose bushes was damaged by the late frosts in May. This made it necessary to postpone rose shows until the last week in June or early July and even then some growers had no bloom. July was cool with us and consequently we had good bloom all through that month and in early August. Our frosts came late in October so we had very good roses much later than usual. Overall growth was excellent and some bushes were nearly six feet tall.

Rose shows were held by the Horticultural Societies in June at Baie d'Urfe, Mount Royal and Valois to our knowledge. In these shows your directors helped with the judging and all report that there was an increase in the number of blooms exhibited. Quality is improving each year and the judges noted a wide range of new varieties being shown. In June, the West End Society and in Lachine, Rose Garden Contests were held and it is really surprising how many people there are in these and other areas who are growing roses. In each case the bushes are usually the pride and joy of the owner.

This season was comparatively free from insect damage, aphids were present in much less numbers and blackspot almost non-existant. Some gardens had a little mildew in September but with so many sprays and dusts available these days, people are using them to best advantage.

We all felt that there was more visiting to our gardens this year and people are very interested in seeing the newer roses that are so extensively advertised by the growers and nurseries. Potted rose bushes are very popular here too and many buyers will pay a higher price for this extra convenience.

Visitors in this area would be well advised to see the Rose Garden in Connaught Park in Mount Royal where 3,000 bushes are planted. Also in Memorial Park in St. Laurent where 2,000 bushes are growing. These gardens are about a mile apart and are very convenient to the Metropolitan Expressway.

We are writing this report in late November after having completed preparations for winter protection of our roses. Snow is on the ground and we look for lots of it to cover the rose beds. Most of us are using deep layers of leaves piled 2-3 feet high to try and keep our rose wood protected as much as possible during periods of low temperature when the readings on the thermometer may be minus 20°F. for several days on end. This and other protective means must be taken to preserve our bushes for another year. Is it worth it — you bet!

ST. PAUL L'ERMITE — *Mrs. R. M. Ferguson*

THE summer of 1961 is just about another memory, and one that will leave an impression for some time. Frost on May 30th, just

about three weeks after our new bushes had been planted really delayed growth on the new plants and damaged early growth on the older bushes. However, of the four bushes we thought had been winter-killed, two managed to start over and do surprisingly well, all things considered.

The winter was a hard one in that we had severe cold before the snow arrived. Spring had many false arrivals and when it finally came, we found we had to prune quite severely, but the bushes soon picked up only to have their early growth hit by a severe frost the end of May.

Our early blooms were delayed and when they finally opened we had rain that made so many of our shrub roses ball.

It was a wet summer and all the bushes grew tremendously, putting out a great deal of new wood, but the bloom was sparse until the fall, at which time we had the most beautiful collection of roses we have ever seen. Roses were in the house until the end of October, and the process of getting the garden ready for winter was really delayed due to a November that was unusual in every way.

We had tried a systemic insecticide early in June. Certainly there were few aphids and no red spider mite, but whether it was due to the insecticide or to the wet weather is hard to say. Blackspot and mildew were difficult to control during the late summer.

The change of weather came rapidly and it meant a great rush at the end to get the mounding done before the snow arrived, and we finally finished with snow falling, with a total depth of fourteen inches on November 28th.

We have experimented with a few bushes this fall, and once more we are looking forward to spring to see the results of this experiment. We bought about a dozen bags of vermiculite and are trying out this method to see if its insulating properties are as good as earth. We are sincerely hoping the experiment will prove successful, as vermiculite is so much lighter to handle than earth, especially when there are about three to four hundred hybrid teas and floribundas to protect each year.

There is a rapid increase in small rose gardens in the district. Usually they include from six to twelve hybrid teas. It is an

interesting sidelight on the "habit forming" aspect of rose growing that each spring one hears these newcomers expressing the intention of obtaining 'just a few more roses'.

QUEBEC CITY — *Louis T. Beaulieu*

THE year 1961 will not be recalled by the rose growers of this area as a good year. The fall of 1960 was very dry, much too dry, but winter as usual brought its heavy quota of snow which usually runs from four to six feet and we are very fortunate to have this heavy blanket over our roses during the four severe months of the winter. We are so used to this condition that it is frequently taken for granted and not fully appreciated.

While the heavy blanket of snow helps a great deal in protecting our roses we cannot count on it entirely as the bushes must be mounded high and well covered. I have always protected my bushes well and have a good record of loss to show for my efforts.

Our snow goes fast and leaves the beds exposed to a period of constant freezing and thawing which frequently extends over a month. This period, which is hard on humans and rose bushes alike, accounts for most of the winter kill amongst our beds.

While May (1960) was a lovely month spring came late in 1961 and May produced much very cold weather and several frosts that held back growth and our rose bushes had a hard time coming through this period. Our seasons seem to be changing as it used to be that May was bright and warm while October, heralding winter, was cold, damp and dark but now these months seem to have interchanged. This year it was almost the middle of July before we had weather that the roses liked and started to grow and when the casualties were counted I had lost one 'Fashion' and three Miniatures. This was my first loss in five years and my neighbour did not fare quite so well losing seven bushes, his first loss in several years.

September and most of October were wonderful months and given good conditions our roses responded with good growth and bloom and enabled them to go into another period of dormancy in good condition.

While the floribundas 'Fashion' and 'Goldilocks' and the hybrid tea 'Tiffany' seem to do well throughout most of the country they

do not seem to acclimatize themselves very well to our conditions. On the other hand such champions as 'Peace', 'Queen Elizabeth' and 'Alain' like our climate and react with a wonderful show.

We are not greatly troubled with insects or disease. I dust about every 10 days throughout the growing season which seems to be adequate as we had no serious trouble — maybe a touch of black-spot on a few bushes towards the end of August.

Our people love roses and would like to have them growing around their houses but unfortunately they have not learned how to prepare them for the winter and spring weather; or having learned are careless, just as in other districts, and have become discouraged with the losses. If all the roses that have been planted here were still living there would be thousands of roses everywhere.

Many of the rose bushes purchased locally are imported in large quantities and do not always arrive in good condition, and since they have not been acclimatized to our conditions they have a hard time becoming established; the percentage of loss is very high and they rarely live through a second winter.

Most of the roses seen in this district are the rugosa and floribunda species due to their hardiness and they do well in borders. Rugosa will survive without protection, sometimes damaged but never seriously, while the floribunda has been known to survive without protection in protected areas. The popular and more tender species including hybrid teas, grandifloras and miniatures are practically non-existent except in private gardens where they receive care and protection. They are not demanding and will grow well most anywhere but a few fundamental rules must be observed.

It is frequently claimed that hybrid teas will not grow in our climate but I am able to grow them at my summer home on Lake St. Joseph a region somewhat colder and with a shorter period of growth. They grow very well there in the natural soil with only the addition of a little fertilizer added once a year.

Many visitors to my gardens exclaim, 'Your roses are wonderful, I did not think they could be grown like that in this part of the country!'

Let us all hope that next year will be a better and more satisfying year for rose culture.

DALHOUSIE — *L. A. Miller*

WE had a cool wet spring in this district and although bloom was later than usual, the quality was excellent. Although we got off to a very slow start, it was a very good season especially during July and August. I was able to have bloom regularly until October 31st and cut a dozen good buds on November 13th.

I would particularly like to stress the value of standard tree roses for northern areas. I started growing these in 1952 and have never lost one. I now have twenty in the following varieties: 'Peace', 'Virgo', 'Ena Harkness', 'Chrysler Imperial', 'New Yorker', 'Kordes Perfecta', 'Crimson Glory', 'Rapture', 'Symphonie' and 'Marcelle Gret'.

The care that they are given to bring them through our winters is as follows: At the end of the growing season (November 1st this year), I remove the stake, gently tie up the branches with fairly heavy twine to form a close 'head'. A trench is then dug about eight inches deep and long enough to enable the entire tree to be buried. The earth is then gently removed from the roots on the opposite side from the trench so that the tree can be bent over into the trench without disturbing the main root system. The stem is then bent over very carefully and the stem and head are covered with a piece of burlap to make it easier to remove the earth in the spring. The stem, roots and top are then well rounded with earth and after the ground is frozen, a few boughs are added. In early spring the earth is removed, the stake is put back and the tree is then raised to an upright position and securely tied. The earth is put back around the roots and fertilizer added using the same procedure as for planting hybrid tea roses.

This sounds like a lot of trouble but I am certain that anyone who enjoys a season of tree roses will realize that they are well worth the extra cost and effort.

CENTRAL NOVA SCOTIA — *Alfred W. Nowlan, New Glasgow*

THE winter of 1960-61 was a tough one; the snow came early, to be followed with severe frosts that continued off and on all winter sometimes lasting for over a week without a let-up. On many days the temperature stayed well below zero and we had nights on end

when the temperature was —20°F. Few bushes would have survived had we been subjected to these heavy frosts without the snow but with the heavy blanket of snow we had very little winter kill. I lost only one bush and it went into winter in poor condition.

When spring came and I removed the eelgrass covering, which I always use to protect my rose beds, and cleared away the mounded soil I found the leafbuds were already showing. In fact the clippings buried the fall before, when I put on the winter covering, were still green and full of life.

In Pictou County our beds begin blooming about the middle of June and what a terrific season this has been. My planting, consisting of about 70 hybrid teas and 30 floribundas and grandifloras, was a blaze of colour all season. After distributing many bouquets among friends and neighbours I used a five gallon pail every few days to pick off the withered blooms.

Along about the middle of October we had some frost which finished off the more tender annuals, but with little set-back the roses continued to bloom. On October 28th I picked my last bouquet of partially opened buds. Now I shall get ready for winter. It is our custom about this time of year to cut our bushes down to about eighteen inches so that they will not be buffeted by the heavy winds of November. This does not induce new growth as the growing season is nearing an end. In a week or two when the leaves begin to fall we will mound them up with soil.

With regard to winter protection there has been a general trend to the use of eelgrass for covering after the usual hilling of soil. In other cases straw, evergreen boughs, peat moss and even planer shavings and sawdust is being used. By actual experience we have found there is less winter kill when the final covering is not put on until after the soil is frozen hard.

The most outstanding H.T. bush in my planting this summer has been 'Pink Peace' which now stands over five feet tall and three feet across. My friends do not all consider this the most outstanding H.T., some of the favourites here are: 'Peace', 'Love Song', 'Sutter's Gold', 'Helen Traubel' and 'Kordes Perfecta'. While I consider these are all great roses, this year, I believe all other H.T. in this area were surpassed by 'Pink Peace'.

Each season we try at least one new variety hoping to find something outstanding. With this in mind I purchased a 'Sterling Silver' bush in the spring of 1960, that first summer was rather a disappointment it only had three inferior blooms all season. This past year it did better, bearing a couple dozen blooms but they were small and insignificant. I have consulted other rose growers in this district and while only a few have tried this bush the results were the same. Another rose selected in this manner was 'Kordes Perfecta' and while it had a good season this year we feel it will not make a lasting contribution to the Stars of Rosedom.

We have had great luck with floribundas, our own bed of twenty is now three years old, and we have never lost or had a bush damaged by winter kill; they have not been harmed by disease or insects. In spite of the fact that we have many newer varieties we still have to pick the Pinocchios as our favourites. This summer as in all past seasons our 'Pink Pinocchio' was covered with blooms for over four months. The variety 'Goldilocks' has been rather disappointing in that it is very trailing and spreads along the ground; it does not go well with the other varieties we have been growing.

Climbers are not too successfully grown in this area due to the cold winds and extreme frosts. While some of the older varieties seem to pull through year after year the more desirable varieties such as 'Blaze', 'Golden Showers' and 'Orange Everglo' winter kill down to the soil mound each winter. The often given advice of laying your climber down and covering with soil is not too easily carried out on a robust plant with a dozen eight or ten foot branches. The climber we have had the most success in carrying through a severe winter is the 'New Dawn'; this is one climber that does bloom on the new season's wood and has always given a good showing in our gardens. However climbers being so beautiful we are still trying, and this past season have added the variety 'Spectacular' to our garden on the advice of a nurseryman friend. Our only experience with ramblers has been with the variety 'Dorothy Perkins', while we understand this to be an old stand-by, we have found it to be highly susceptible to mildew.

This has been an unusual fall, early in October we had a heavy frost and the night temperature dropped to 24°F. to be followed by two weeks of warm weather in the latter part of the month with

temperatures above 70°. Now on November 10th we have had our first snowfall, surely this will encourage our plants to drop their leaves and prepare for a good old-fashioned Nova Scotia winter.

ANNAPOLIS ROYAL — *Mrs. Marie Cox*

WELL, it is November 7th and just about the end of the rose season for another year. Even at this late date many of us in this district have been picking roses right along which is indeed remarkable.

During the summer I had the pleasure of meeting many people who visited our garden, most of them rose growers like myself, and of course we had an opportunity to discuss all phases of rose culture including the problems of spraying and dusting — and also our favourite varieties. All were sure that 1961 was the best season for rose growing that we have had in this area for many years. Plenty of sunshine and lots of rain just when it was needed brought out an abundance of fine-quality bloom.

On checking my notes in regard to last winter I find that we had severely cold weather but with lots of snow and it would be considered a severe winter for this district. However, our winter losses were insignificant and we are encouraged to think that we are learning how to keep our bushes in better health — and the amount of protection they need to survive our winters.

The Champlain Garden Club and the Digby Horticultural Society combined to stage a rose show at our Community Centre here in Annapolis Royal on July 12th. We found that this date was a little late for our best blooms and have decided that in the future we will try to have our shows during the last week of June, or no later than the first week in July. However, I am proud to report that we had 32 exhibitors who staged 194 exhibits and the quality of the bloom was magnificent. It is encouraging to note the progress our exhibitors are making in the proper dressing and staging of their exhibits and it is my hope that in the near future our growers will be able to compete at larger shows.

A delightful afternoon tea was held in connection with the rose show and this event was well attended and greatly enjoyed. It gave us all an opportunity to relax in the beautiful setting of roses and to talk about our hobby to our hearts content. It is a joy to see these sun-tanned gardeners gathered together on this occasion in a spirit

'MISCHIEF' (H.T.)
'*Peace*' × '*Spartan*'
Raised by Sam McGredy, Portadown
TRIAL GROUND CERTIFICATE AND CERTIFICATE OF MERIT, 1960
Reproduced by kind permission of the National Rose Society of Great Britain

of warm friendliness which must be the envy of other organizations. The small admission charge that we do make is put to good purpose thus making our pleasant afternoon seem even more worthwhile.

This year the bronze medal went to Mrs. Gordon Ells of Bridgetown who has just graduated from the category of novice. While she only had one entry it was a beautiful specimen of 'Charles Mallerin'. Mr. J. A. Ruffee, of Granville Ferry won the silver bowl for the best three hybrid teas and the certificate for floribunda rose bushes, awarded by Pic-a-rose-gardens for the best three floribundas, was won by Miss Helen Baxter. Unfortunately space does not permit mention of the many other lovely entries that won blue ribbons. It has not been many years since the people in this part of the province took up rose culture seriously and knowing of the contagious nature of this hobby I am certain that it will spread rapidly.

Generally speaking the most popular hybrid teas here would be the old reliables such as 'Peace', 'Ena Harkness', 'Diamond Jubilee', 'Virgo', 'Suter's Gold', 'Charlotte Armstrong', 'Golden Sun', 'Pink Peace' and 'Garden Party'. In the grandifloras 'Queen Elizabeth' is still the queen and amongst the floribundas we find mostly the well-known varieties with the odd newcomer. At the show I was invited to stage a non-competitive exhibit of some of the newer varieties and if they live up to expectations they will soon be widely grown in our gardens. A lot of ardent rose growers from all parts of Canada pass through our community each summer. Please feel free to come and see us; you will be very welcome.

PRINCE EDWARD ISLAND — *Dr. R. G. Lea, Charlottetown*

ROSE growers in this area are at this time apprehensively watching the weather and their roses, trying to pick the optimum time to apply their winter covering after another excellent season. Winter covering here consists almost exclusively of mounding each bush high with soil and hoping for an adequate cover of snow before heavy frost. Last winter's exceptionally heavy snow gave ideal conditions and the roses came through with almost no loss. However, those amongst us who were too optimistic and removed our covering too early encountered considerable losses during the month of May. The early season was fine and warm and promoted very early shoot and leaf growth. However, the weather then became

very cold and windy and toward the months end, very wet. The result was that much of the new growth and foliage withered and died, and in only a small percentage, did the bush survive and start afresh. As a result, many of the exposed gardens got a very poor start, though they came on rapidly and did enjoy one of our best years. As a result of this experience, and observations over the years, it would appear to be prudent not to remove the earth moundings before May 15th and not to set out any new stock before June 1st except in the most favourable years. It was observed this year that new plants started as late as June 20th came along as rapidly and bloomed as soon as bushes planted six weeks earlier.

Rose growers in this area experienced another and different type of loss this season, with the retirement of Mr. Gordon Warren from the Experimental Farm staff who has moved to Halifax to enjoy his retirement. Mr. Warren served as district representative of the Canadian Rose Society for many years and was the source of much encouragement and assistance to all of us for many years. It is a tribute to Mr. Warren that this area has so many active and enthusiastic rose growers. Fortunately, Mr. Warren is not lost to us completely for we still have the opportunity to see and hear him and profit by his advice as he is continuing with his Maritime Gardener programme carried by the Canadian Broadcasting Company.

The Annual Rose Show was held this year on the 12th of July and again sponsored by the Parkdale Womens Institute under the energetic and capable guidance of Mrs. Frank Ross, herself an accomplished grower of roses. There was a marked increase in both the quality and quantity of the exhibits. Of particular significance was the very marked increase in the number of new exhibitors. Mr. and Mrs. H. E. Hyndman carried away the prize for most points of the show, and had, as well — the Best of Show with a beautiful specimen of 'First Love'. Mrs. H. Thomson was the Best of the Show for first year exhibitors with her 'Chrysler Imperial'.

After a warm dry summer we have had a beautiful warm autumn with the result that there has been an exceptionally good showing right up to mid-October. This, of course, carries with it increased liability to winter damage but with the lessons of the past as a guide we are hopeful of another propitious winter with its promises for another successful season.

The Rose Analysis

ONCE more Mr. Archie Selwood, assisted by Mr. E. N. Grant, has given us an analysis of the opinion and experience of many well-known amateur rose growers throughout Canada and including a few of our American friends. These reports come from widely separated areas with a great variance in soil and climate and while some roses do better in certain areas those showing high ratings in the tables have earned this popularity through outstanding performance under all conditions of soil and climate.

The tables have been very carefully prepared, as in former years, and their simplicity requires little comment however we would like to make a few observations particularly for the newer members.

In the *Newer Roses H.T. tables* 'Kordes Perfecta' has again shown outstanding popularity. Next year it will be in open competition with all of the old favourites and it will be interesting to see its over-all popularity. Some of the newer 1960 and 1961 introductions that have shown a great deal of merit are still well down on the lists but in most cases they will rise rapidly as they become better known and are more widely planted.

We seem to have a great variance of opinion between the East and West tables of *Newer Roses, Floribundas* but 'Dickson's Flame', 'Ivory Fashion' and 'Sarabande' have received a lot of support. 'Circus' and 'Little Darling' that graduated from this table this year have done very well in open competition. 'Pink Parfait' now leads the popularity poll of both East and West tables of *Newer Roses, Grandiflora* followed by 'Starfire'.

In the elite group of *Exhibition Roses,* both tables, it is 'Peace', 'Show Girl' and 'Burnaby' with 'Show Girl' making an outstanding gain. The Western table of *Beginners and General Garden Roses* remains the same as last year with 'Peace', 'Ena Harkness' and 'Burnaby' leading all others but it is interesting to note that 'Ena Harkness' is a real challenge for top points having drawn up even

with 'Peace'. The Eastern table showing 'Peace', 'Crimson Glory' and 'Karl Herbst' as the popular leaders was not so kind to 'Ena Harkness' who lost the third position held last year to 'Karl Herbst'.

Autumn Blooming Roses H.T. East led by 'Peace', 'Crimson Glory' and 'Show Girl' emphasizes the increasing popularity of the latter which has moved up to displace 'Ena Harkness' from third position. The Western table has reinstated 'Peace' in first position followed by 'First Love' and 'Ena Harkness' which held first position last year.

The *Bedding Roses H.T.* tables have been discontinued after a great deal of consideration as they appeared to be duplicating much of the information without serving any direct purpose.

Climbing and Rambling Roses, East has given first position to 'New Dawn' followed by 'Paul's Scarlet Climber' and 'Blaze' which is the same as last year except that 'New Dawn' and 'Paul's Scarlet Climber' have interchanged positions. The Western contributors to this table still vote 'Paul's Lemon Pillar' as their favourite followed by 'Blaze' and 'Paul's Scarlet Climber'. It is to be noted that while 'Paul's Lemon Pillar' is the favourite in the West it has not nearly the same popularity in the East, due we think to a matter of climate. It is a fine rose that has been around since 1915 and if disbudded will give all the fine exhibition blooms you could wish. Mr. Selwood predicts that with the high-growing grandifloras for background planting that climbers will gradually lose some of their popularity. His two 'Queen Elizabeth' which are the regular bush variety are 11 feet tall.

The *Floribunda Roses* tables, both East and West, have selected 'Fashion', 'Frensham' and 'Vogue' and with some variation in positions this has been the selection for some time. These fine floribundas have merited their votes but will soon be pressed by a few of the newer varieties that are proving themselves.

In the *Grandiflora* tables we find that the Western and Eastern contributors have made identical selections of the first five varieties. 'Queen Elizabeth' is still the queen of this group and also very highly recommended for hedges.

Miniature Roses East and West have been combined and each variety reported has been included. As yet there are not enough of

our contributors growing more than two or three varieties to get a useful appraisal but it must be noted that 'Bit O'Sunshine' and 'Cinderella' have maintained their popularity.

In summarizing we find that based on the opinion of our contributors, the most popular all-purpose hybrid tea rose grown in all rose-growing areas of Canada, and some of the American states, is 'Peace' by a very wide margin, followed by 'Ena Harkness', 'Burnaby', 'Show Girl' and 'Crimson Glory'. For the first time 'Show Girl' has been up amongst the leaders and compared with last year's table 'Crimson Glory' has lost considerable support although still amongst the first five.

EAST

Mr. A. M. Anderson, Ontario
Mrs. J. H. Baillie, Ontario
Mr. E. Billington, Ontario
Mr. W. G. Borland, Quebec
Mr. O. E. Bowles, Ontario
Mr. M. A. Cadsby, Ontario
Mr. R. A. M. Clark, Michigan State
Mr. H. C. Cross, Quebec
Mr. C. A. Davis, New York State
Mrs. R. M. Ferguson, Quebec
Mr. E. B. Jubien, Quebec
Mr. W. J. Keenan, Ontario
Dr. R. G. Lea, Prince Edward Island
Mr. W. J. McNeill, Ontario
Mr. L. A. Miller, New Brunswick
Mr. E. Mitchell, Ontario
Dr. C. T. Moyle, Ontario
Mr. A. A. Norton, Ontario
Dr. R. W. Oliver, Ontario
Mr. H. C. Westbrook, Ontario
Mr. C. T. Wilson, Ontario

WEST

Mr. F. Blakeney, British Columbia
Mr. Georges Bugnet, Alberta
Dr. J. M. Burkhart, Washington State
Mr. H. L. Davidson, Oregon State
Mr. J. A. Davidson, British Columbia
Mr. J. H. Eddie, British Columbia
Mr. Fred Edmunds, Oregon State
Mr. H. J. Faulkner, British Columbia
Mr. E. N. Grant, British Columbia
Mr. R. E. Harris, Horticulturist, Canada
Dept. of Agriculture, Peace River Dist., Alberta
Mr. A. C. Howell, British Columbia
Mrs. Mary E. Matthews, British Columbia
Mrs. W. A. MacDonald, Manitoba
Mr. J. H. McGhie, British Columbia
Mrs. John McLachlan, British Columbia
Mrs. H. S. McLeod, British Columbia
Mrs. R. E. Murdoch, British Columbia
Mr. F. N. Parker, British Columbia
Mr. J. L. Petty, British Columbia
Mr. J. D. Searle, Washington State
Mr. A. Selwood, British Columbia
Mr. Preston Sharpe, British Columbia
Dr. F. L. Skinner, Manitoba
Dr. Paul B. Smith, Washington State
Mrs. W. H. Walkinshaw, British Columbia

1. NEWER ROSES, H.T.

INTRODUCED IN CANADA SINCE 1 JANUARY 1957

EAST

Position	*Name*	*Points*	*Introduced*	*Colour*	*Category*
1.	*Kordes Perfecta	334	1957	Cream, edged pink	2, 3, 4
2.	*Gail Borden	240	1957	Rose pink, cream reverse	2, 3, 4
3.	Garden Party	183	1959	Cream-white, pink edge	2, 3, 4
4.	*Ballet	176	1958	Clear rose	2, 3, 4
5.	*Pink Lustre	151	1957	Light pink	2, 3, 4
6.	*Pink Peace	133	1959	Deep Dusty pink	
7.	Lady Zia	125	1959	Orange scarlet	2, 3, 4
8.	Piccadilly	117	1960	Red and yellow	2, 3, 4
9.	Christian Dior	115	1958	Scarlet	2, 3, 4
10.	*Silver Lining	114	1958	Silver rose	2, 3, 4
11.	*Isobel Harkness	105	1957	Clear yellow	2, 3, 4
12.	Rose Gaujard	93	1958	White, pale pink, silver reverse	2, 3, 4
13.	*Golden Sun	84	1957	Deep yellow	2, 3, 4
14.	*Prima Ballerina	91	1957	Cherry pink	3, 4
15.	Duet	70	1960	Light pink, deeper reverse	3, 4
16.	Suspense	68	1960	Red, yellow reverse	2, 3, 4
17.	*Angel Wings	64	1958	Yellow, white pink edge	
18.	Chantre	64	1958	Bronze orange	2, 3
19.	Wendy Cussons	58	1960	Deep cerise	2, 3, 4
20.	*Fritz Thiedemann	56	1960	Dark vermilion	2, 3, 4

WEST

1.	*Kordes Perfecta	468	1957	Cream edged pink	2, 3, 4
2.	*Silver Lining	297	1959	Silvery rose	2, 3, 4
3.	*Golden Sun	286	1957	Deep yellow	2, 3, 4
4.	Christian Dior	253	1958	Scarlet	2, 3, 4
5.	*Angel Wings	252	1958	Yellow white, pink edge	2, 3
6.	Duet	243	1960	Light pink, deeper reverse	2, 3, 4
7.	*Super Star	241	1960	Pale vermilion	2, 3, 4
8.	Wendy Cussons	202	1960	Deep cerise	2, 3, 4
9.	Rose Gaujard	202	1958	White pale pink, silver reverse	2, 3, 4
10.	Memoriam	200	1961	Pale pink to near white	2, 3, 4
11.	Garden Party	198	1959	Creamy white, edged pink	2, 3, 4
12.	*Pink Peace	189	1959	Deep dusty pink	2, 3, 4
13.	*Gail Borden	174	1957	Rose pink, cream reverse	2, 3, 4
14.	*Aztec	172	1957	Orange scarlet	2, 3, 4
15.	*Ballet	169	1958	Clear rose	2, 3, 4
16.	*Prima Ballerina	167	1957	Cherry pink	3, 4
17.	*Arlene Francis	165	1957	Golden yellow	2, 3, 4
18.	Hawaii	163	1960	Orange coral	2, 3, 4
19.	My Choice	152	1960	Pale yellow, scarlet cerise	2, 3, 4
20.	*Isobel Harkness	152	1957	Clear yellow	2, 3, 4

* Noticeably fragrant 2 Exhibition 3 General Garden 4 Autumn Blooming

1. NEWER ROSES, FLORIBUNDAS

INTRODUCED IN CANADA SINCE 1 JANUARY 1957

EAST

Position	*Name*	*Points*	*Introduced*	*Colour*
1.	All Gold	192	1958	Yellow
2.	Dickson's Flame	172	1958	Scarlet flame
3.	Iceberg	165	1958	Pure white
4.	*Ivory Fashion	130	1958	White
5.	Sarabande	119	1957	Light orange red
6.	Shepherd's Delight	108	1957	Flame and yellow
7.	Heat Wave	91	1958	Orange scarlet
8.	Orangeade	87	1959	Bright orange
9.	*Highlight	86	1957	Orange scarlet
10.	*Dearest	80	1960	Salmon pink
11.	Tambourine	79	1959	Carmine, red, orange, yellow
12.	Lilli Marlene	72	1959	Scarlet red
13.	St Pauli	67	1958	Carmine orange
14.	Chanelle	49	1959	Peach to rose pink
15.	Lilli Marlene	45	1959	Scarlet red
16.	Elsinore	44	1957	Bright scarlet
17.	Meteor	44	1957	Orange scarlet
18.	Doris Norman	43	1958	Light orange scarlet
19.	*Lavender Girl	39	1958	Purple to lavender
20.	Starlet	34	1957	Yellow

WEST

1.	Sarabande	290	1957	Light orange red
2.	*Fire King	215	1959	Vermilion
3.	*Ivory Fashion	164	1958	White
4.	Dicksons Flame	162	1958	Scarlet flame
5.	Heat Wave	146	1958	Orange scarlet
6.	Anna Wheatcroft	144	1960	Light coral pink
7.	Shepherd's Delight	143	1957	Flame and yellow
8.	Lilli Marlene	132	1959	Scarlet red
9.	Iceberg	128	1958	Pure white
10.	Pinafore	121	1959	White shaded pink
11.	Allgold	118	1958	Yellow
12.	Red Ruffles	107	1960	Dark red
13.	*First Choice	106	1958	Orange scarlet
14.	Golden Slippers	100	1961	Orange gold
15.	Coop de Foudre	89	1957	Fiery red
16.	Green Fire	88	1958	Bright yellow
17.	Bellina	87	1958	Pink flushed cardinal
18.	*White Bouquet	80	1957	White
19.	*Highlight	77	1957	Orange scarlet
20.	‡*Lavender Lassie	71	1960	Lilac pink

* Noticeably fragrant

‡ Lavender Lassie classified as a hybrid musk in A.R.S. Annual, 1961 'Rose Cultivar Names'

1. NEWER ROSES, GRANDIFLORAS, CLIMBERS AND SHRUBS

INTRODUCED IN CANADA SINCE 1 JANUARY 1957

EAST

Position	*Name*	*Points*	*Introduced*	*Colour*
	GRANDIFLORAS			
1.	*Pink Parfait	184	1960	Pink blend
2.	*Starfire	181	1958	Currant red
3.	*June Bride	155	1957	White
4.	*Merry Widow	92	1958	Velvet Crimson
5.	El Capitan	64	1958	Glowing cherry red
6.	*Governor Rosselini	46	1958	Red
7.	*Cherry Glow	24	1959	Medium red
8.	*Golden Girl	18	1959	Golden yellow
	CLIMBERS			
1.	*Don Juan	38	1958	Velvet dark red
2.	*Royal Gold	24	1957	Golden yellow
3.	*Kassel	14	1957	Orange scarlet

WEST

	GRANDIFLORAS			
1.	*Pink Parfait	163	1960	Pink blend
2.	El Capitan	151	1958	Glowing cherry red
3.	John S. Armstrong	118	1962	Dark red
4.	*Starfire	87	1958	Currant red
5.	*Merry Widow	43	1958	Velvet crimson
6.	*Golden Girl	23	1960	Golden yellow
7.	*Governor Rosselini	21	1959	Red
8.	Paleface	16	1958	White
	CLIMBERS			
1.	Clg. Eutin	28	1957	Carmine red
2.	*Royal Sunset	24	1960	Apricot
3.	*Don Juan	20	1958	Velvet dark red
	SHRUB			
1.	*Heidelberg	24	1958	Bright red

* Noticeably fragrant

2. EXHIBITION ROSES

INCLUDES ONLY VARIETIES INTRODUCED IN CANADA BEFORE 1 JANUARY 1957

See also 'Newer Roses' Tables

EAST

Position	*Name*	*Points*	*Introduced*	*Colour*
1.	Peace	387	1946	Yellow, edged pink
2.	*Show Girl	347	1946	Deep rose pink
3.	Burnaby	309	1951	Creamy yellow
4.	*Crimson Glory	294	1935	Deep crimson
5.	*Chrysler Imperial	259	1952	Deep crimson
6.	*Karl Herbst	258	1950	Scarlet to deep red
7.	*Confidence	253	1952	Pink blend
8.	McGredy's Yellow	199	1933	Pale yellow
9.	*Margaret	196	1954	Light pink
10.	*Rubaiyat	189	1946	Rose red
11.	*Josephine Bruce	188	1953	Dark crimson
12.	*Diamond Jubilee	157	1947	Cream, orange buff
13.	Charlotte Armstrong	152	1940	Carmine rose
14.	*Ena Harkness	150	1946	Glowing red
15.	*McGredy's Ivory	144	1929	Creamy white
16.	*Tiffany	143	1954	Pink gold base
17.	*Helen Traubel	108	1951	Apricot pink
18.	Anne Letts	108	1953	Light pink
19.	Michele Meilland	95	1945	Light salmon coral
20.	Virgo	89	1947	White

WEST

1.	Peace	383	1946	Yellow, edged pink
2.	*Ena Harkness	327	1946	Glowing red
3.	*Show Girl	321	1946	Deep rose pink
4.	Burnaby	321	1951	Creamy yellow
5.	*Anne Letts	316	1953	Pale pink
6.	McGredy's Yellow	301	1933	Pale yellow
7.	Pink Favourite	291	1956	Pink
8.	*Karl Herbst	290	1950	Scarlet to deep red
9.	*Josephine Bruce	287	1953	Dark crimson
10.	*Crimson Glory	285	1935	Deep crimson
11.	*Paul's Lemon Pillar	263	1915	Pale lemon
12.	*Diamond Jubilee	260	1947	Cream, orange buff
13.	*Tiffany	245	1954	Pink, gold base
14.	*Eden Rose	240	1953	Tyrian rose
15.	*Rubaiyat	236	1946	Rose red
16.	Ethel Sanday	234	1954	Apricot yellow
17.	Sam McGredy	210	1937	Creamy buff
18.	*Confidence	207	1953	Pink and yellow blend
19.	*Margaret	183	1954	Clear light pink
20.	*Chrysler Imperial	174	1952	Deep crimson

* Noticeably fragrant

3. BEGINNERS AND GENERAL GARDEN ROSES, H.T.

INTRODUCED IN CANADA BEFORE 1 JANUARY 1957

See also 'Newer Roses' Tables

EAST

Position	*Name*	*Points*	*Introduced*	*Colour*
1.	Peace	370	1946	Yellow-edged pink
2.	*Crimson Glory	273	1935	Deep crimson
3.	*Karl Herbst	264	1950	Scarlet to deep red
4.	Michele Meilland	214	1945	Light salmon coral
5.	*Ena Harkness	203	1946	Glowing red
6.	*Tiffany	176	1954	Pink, gold base
7.	McGredy's Yellow	172	1933	Pale yellow
8.	*Show Girl	166	1946	Deep rose pink
9.	Burnaby	156	1951	Cream yellow
10.	*Margaret	152	1954	Clear light pink
11.	*Chrysler Imperial	142	1952	Deep crimson
12.	*Confidence	141	1952	Pink blend
13.	*Sutter's Gold	140	1949	Yellow flushed pink
14.	*Josephine Bruce	134	1953	Dark crimson
15.	*Rubaiyat	132	1946	Rose red
16.	*Mojave	107	1954	Orange, nasturtium red, apricot
17.	*Anne Letts	107	1954	Pale pink
18.	Virgo	104	1947	White
19.	*Helen Traubel	102	1951	Apricot pink
20.	*Grand'Mere Jenney	97	1950	Peach pink

WEST

1.	Peace	374	1946	Yellow-edged pink
2.	*Ena Harkness	374	1946	Glowing red
3.	Burnaby	284	1951	Creamy yellow
4.	First Love	267	1950	Pale pink to deeper
5.	Pink Favourite	198	1956	Deep pink
6.	*Josephine Bruce	188	1953	Dark crimson
7.	McGredy's Yellow	179	1933	Pale yellow
8.	*Anne Letts	178	1954	Pale pink
9.	Virgo	177	1947	White
10.	*Mrs. Sam McGredy	169	1929	Coppery orange
11.	Michele Meilland	159	1945	Light salmon coral
12.	*Margaret	150	1954	Clear light pink
13.	*Tiffany	149	1954	Pink gold base
14.	*Crimson Glory	147	1935	Deep crimson
15.	Picture	140	1932	Clear rose pink
16.	*Show Girl	138	1946	Deep rose pink
17.	Bayadere	138	1954	Salmon pink yellow base
18.	Charlotte Armstrong	137	1940	Carmine rose
19.	*Fantasia	135	1943	Gold to light yellow
20.	*Sutter's Gold	134	1949	Yellow flushed pink

* Noticeably fragrant

4. AUTUMN BLOOMING ROSES, H.T.

INTRODUCED IN CANADA BEFORE 1 JANUARY 1957

See also 'Newer Roses' Tables

EAST

Position	*Name*	*Points*	*Introduced*	*Colour*
1.	Peace	382	1946	Yellow-edged pink
2.	*Crimson Glory	241	1935	Dark crimson
3.	*Show Girl	210	1946	Deep rose pink
4.	*Chrysler Imperial	190	1952	Deep crimson
5.	*Karl Herbst	183	1950	Scarlet to deep red
6.	*Tiffany	179	1954	Pink gold base
7.	*Confidence	169	1952	Pink blend
8.	*Ena Harkness	161	1946	Glowing red
9.	Michèle Meilland	157	1945	Light salmon coral
10.	*Josephine Bruce	154	1953	Dark crimson
11.	*Rubaiyat	148	1946	Rose red
12.	*Sutter's Gold	139	1949	Yellow flushed pink
13.	*Anne Letts	134	1953	Pale pink
14.	Burnaby	132	1951	Cream yellow
15.	Virgo	124	1947	White
16.	*Helen Traubel	110	1951	Apricot pink
17.	McGredy's Yellow	102	1933	Pale yellow
18.	*Margaret	95	1954	Clear light pink
19.	*Diamond Jubilee	89	1947	Cream, orange buff
20.	*Opera	79	1950	Scarlet yellow base

WEST

1.	Peace	344	1946	Yellow, edged pink
2.	First Love	270	1950	Pale to deeper pink
3.	*Ena Harkness	269	1946	Glowing red
4.	*Crimson Glory	241	1935	Dark crimson
5.	McGredy's Yellow	209	1933	Pale yellow
6.	*Tiffany	203	1954	Pink, gold base
7.	*Helen Traubel	201	1951	Apricot pink
8.	*Show Girl	197	1946	Deep rose pink
9.	*Mrs. Sam McGredy	196	1929	Coppery orange
10.	Burnaby	188	1951	Creamy yellow
11.	*Margaret	185	1954	Clear light pink
12.	*Sutter's Gold	184	1949	Yellow flushed pink
13.	*Diamond Jubilee	182	1947	Cream, orange buff
14.	*Josephine Bruce	168	1953	Dark crimson
15.	Pink Favourite	150	1956	Pink
16.	*Hector Deane	142	1938	Carmine salmon pink
17.	*Grandmère Jenny	134	1955	Apricot yellow, pink
18.	*Opera	132	1950	Scarlet, yellow base
19.	*Golden Sceptre	127	1950	Deep yellow
20.	*Rubaiyat	119	1946	Rose red

* Noticeably fragrant

5. CLIMBING AND RAMBLING ROSES

INCLUDES ONLY VARIETIES INTRODUCED IN CANADA BEFORE 1 JANUARY 1957

EAST

See also 'Newer Roses' Tables

Position	*Name*	*Points*	*Introduced*	*Colour*
1.	New Dawn	244	1930	Pale soft pink
2.	Paul's Scarlet Climber	195	1916	Scarlet
3.	Blaze	158	1932	Scarlet
4.	*Golden Showers	106	1956	Daffodil yellow
5.	Thor	95	1940	Crimson
6.	*Danse du Feu (Spectacular in U.S.A.)	88	1953	Scarlet red
7.	*Dr. J. H. Nicolas	87	1940	Rose pink
8.	*Coral Dawn	78	1952	Rose pink
9.	*Paul's Lemon Pillar	70	1915	Pale lemon yellow
10.	*Zepherine Drouhin	65	1868	Rose, white base
11.	*Dr. W. Van Fleet	58	1910	Pale soft pink
12.	*Elegance	54	1938	Spectrum yellow
13.	*Parade	54	1953	Deep rose pink
14.	*Gladiator	50	1955	Light red
15.	Cl. Peace	49	1950	Yellow edged pink
16.	*Cl. Goldilocks	46	1951	Yellow to cream
17.	*Copper Glow	39	1940	Copper
18.	Glenn Dale	38	1927	Lemon to white
19.	*Flammentanz	37	1955	Crimson
20.	*Guinee	37	1938	Blackish garnet

WEST

1.	*Paul's Lemon Pillar	326	1915	Pale lemon
2.	Blaze	247	1932	Scarlet
3.	Paul's Scarlet Cl.	245	1916	Scarlet
4.	*Cl. Mrs. Sam McGredy	237	1937	Coppery orange
5.	*High Noon	222	1946	Bright yellow
6.	New Dawn	206	1930	Blush pink
7.	*Ruth Alexander	194	1937	Orange, yellow base
8.	*Danse du Feu (Spectacular in U.S.A.)	134	1953	Scarlet red
9.	*Mrs. Arthur Curtis James	132	1933	Sunflower yellow
10.	*Golden Showers	129	1956	Daffodil yellow
11.	*Dr. W. Van Fleet	128	1910	Blush pink
12.	*Cl. Ena Harkness	110	1954	Glowing red
13.	*Meg.	108	1954	Salmon apricot, red stamens
14.	*Blossomtime	99	1951	Cameo pink
15.	*Elegance	90	1938	Spectrum yellow
16.	*Cl. Shot silk	87	1931	Cherry cerise, yellow base
17.	*Coral Dawn	85	1952	Rose pink
18.	*Zepherine Drouhin	79	1868	Rose, white base
19.	*Cl. Etoile de Hollande	77	1931	Bright red
20.	*Gladiator	74	1955	Rose red

* Noticeably fragrant

6. FLORIBUNDA ROSES

INCLUDES ONLY VARIETIES INTRODUCED IN CANADA BEFORE 1 JANUARY 1957

See also 'Newer Roses' Tables

EAST

Position	*Name*	*Points*	*Introduced*	*Colour*
1.	*Fashion	311	1949	Salmon peach
2.	Frensham	299	1948	Scarlet crimson
3.	*Vogue	237	1951	Deep coral cherry
4.	Alain	197	1946	Scarlet crimson
5.	*Spartan	197	1954	Reddish salmon orange
6.	*Independence	196	1949	Orange scarlet
7.	*Little Darling	193	1956	Red, orange, rose blend
8.	*Donald Prior	173	1934	Scarlet crimson
9.	*August Seebauer	169	1944	Deep rose pink
10.	Masquerade	164	1949	Yellow, pink, red
11.	*Irene of Denmark	149	1951	White
12.	Else Poulsen	148	1924	Rose pink
13.	*Betty Prior	103	1935	Carmine pink
14.	*Cocorico	100	1950	Glowing scarlet
15.	*Rosenelfe	94	1938	Delicate pink
16.	*Pinocchio	80	1940	Salmon pink
17.	*Jiminy Cricket	76	1954	Tangerine red
18.	Orange Triumph	67	1937	Red, shaded orange
19.	*Ma Perkins	63	1952	Salmon-shell-pink
20.	*Circus	62	1956	Yellow, pink, salmon, scarlet

WEST

1.	Frensham	297	1948	Scarlet crimson
2.	*Fashion	248	1949	Salmon peach
3.	*Vogue	248	1951	Deep coral cherry
	*Little Darling	215	1956	Red, orange, rose blend
5.	*Circus	186	1956	Yellow, pink, salmon, scarlet
6.	Masquerade	166	1949	Yellow, pink, red
7.	*Spartan	157	1954	Reddish, salmon orange
8.	*Rosenelfe	138	1938	Delicate pink
9.	*Lilibet	135	1954	Dainty pink
10.	*Donald Prior	134	1934	Scarlet crimson
11.	*Cocorico	127	1950	Glowing scarlet
12.	*Pink Bountiful	124	1945	Pink
13.	*Jiminy Cricket	123	1954	Tangerine red
14.	Alain	120	1946	Scarlet crimson
15.	*Fashionette	118	1955	Pinkish coral
16.	Concerto	115	1953	Glowing scarlet
17.	*Independence	114	1949	Orange scarlet
18.	Else Poulsen	113	1924	Rose pink
19.	Dainty Maid	112	1940	Pink, carmine reverse
20.	Korona	111	1955	Orange scarlet

* Noticeably fragrant

7. GRANDIFLORA ROSES

INCLUDES ONLY VARIETIES INTRODUCED IN CANADA BEFORE 1 JANUARY 1957

See also 'Newer Roses' Tables

EAST

Position	*Name*	*Points*	*Introduced*	*Colour*
1.	*Queen Elizabeth	296	1954	Clear pink
2.	Montezuma	231	1955	Orange salmon
3.	*Carrousel	199	1950	Brilliant red
4.	*Buccaneer	150	1952	Yellow
5.	*Roundelay	122	1954	Dark red
6.	Dean Collins	47	1953	Carmine
7.	*Gay Heart	24	1951	Rose pink
8.	*Brennende Liebe (Burning Love)	22	1956	Scarlet
9.	*Miss France	18	1955	Coppery cinnabar
10.	Queen of Bermuda	15	1956	Geranium red, orange

WEST

1.	*Queen Elizabeth	370	1954	Clear pink
2.	Montezuma	327	1955	Orange salmon
3.	*Carrousel	293	1950	Brilliant red
4.	*Buccaneer	225	1952	Yellow
5.	*Roundelay	175	1954	Dark red
6.	*Miss France	82	1955	Coppery cinnabar
7.	Queen of Bermuda	33	1956	Geranium red, orange
8.	Dean Collins	31	1953	Carmine
9	*Brennende Liebe (Burning Love)	26	1956	Scarlet
10.	*Gay Heart	22	1951	Rose pink

* Noticeably fragrant

8. MINIATURE ROSES

EAST AND WEST

Position	*Name*	*Points*	*Introduced*	*Colour*	*Height*
1.	*Bit O'Sunshine	109	1956	Yellow	T.
2.	*Cinderella	100	1952	White, edged carmine	L.
3.	*Sweet Fairy	87	1946	Pink	M.
4.	*Baby Masquerade	85	1956	Yellow, pink, red	T.
5.	*Midget	73	1940	Rose red	M.
6.	Perla de Alcanada	72	1944	Carmine	M.
7.	Parati (Pour toi) (For You)	68	1946	White yellow base	M.
8.	*Rosina (Josephine Wheatcroft)	64	1951	Yellow	T.
9.	Rouletti	59	1939	Rose pink	L.
10.	*Dwarf King (Zwergkonig)	58	1957	Carmine	M.
11.	Perla de Montserrat	56	1945	Pink, edged pearl	M.
12.	*Red Imp (Maid Marian)	46	1951	Deep velvet red	M.
13.	Tom Thumb (Peon)	42	1935	Crimson, white eye	L.
14.	Rosada	41	1950	Peach, edged Neyron pink	M.
15.	Coralin (Karolyn)	41	1955	Red	L.
16.	Tinker Bell	39	1954	Pink	M.
17.	Spring Song	38	1957	Salmon pink	T.
18.	Prince Charming	36	1953	Bright crimson	M.
19.	Granadina	35	1956	Oxblood red	L.
20.	Robin	34	1956	Rich deep red	M.
21.	*Frosty	31	1953	Clear white	T.
22.	Little Scotch	30	1959	Butterscotch	
23.	Peggy Grant	26	1954	Shell pink	L.
24.	Mon Petit	25	1947	Light crimson	L.
	Cricri	25	1958	Salmon coral	T.
	Named by contributors, additional to those which made the regular list				
25.	*Baby Betsy McCall	24	1960	Pearl pink	L.
26.	Simple Simon	24	1955	Carmine, yellow base	M.
27.	Mona Ruth	22	1960	Rose pink	
28.	Bo Peep	20	1950	Deep rose pink	L.
29.	Pink Heather	20	1960	Lavender, pink, white	T.
30.	Little Buckeroo	19	1956	Bright red, white centre	T.

CLIMBING MINIATURES

	Pink Cameo	—	1954	Rose pink, darker centre
	Fairy Princess	—	1955	Salmon apricot, pink
	Candy Cane	—	1958	Rose red, white stripes solid pink on reverse
	Magic Wand	—	1957	Orange

* Noticeably fragrant T — Tall M — Medium L — Low

The Clearing House

Compiled and Edited by W. J. Keenan

WHILE this review is intended for roses introduced within the past five years, exception to same must be made as many of the varieties are not available or known in Canada until one or more years after the introduction. It is hoped this will give our members a real opportunity to become acquainted with the names and values of the newer roses. We are again making a note under the rose which will be appearing in the Clearing House for the last time.

We hope that the information such as nature of soil and sun exposure together with number of bushes, number of years grown and the average height, will be of both interest and service to our members; however, the difference in climatic conditions must be taken into consideration.

This year your editor had the pleasure of meeting Mr. W. C. Buchanan, Sydney, Nova Scotia and Mr. Emerson Mitchell, Windsor, Ontario, who have made valued contributions to the Clearing House over many years, it was a treat to see the beautiful coloured slides of their respective gardens.

We are delighted to have this year contributions from 4 (four) of our members in the United States, as each of these gentlemen are outstanding rose growers we are indeed fortunate in having their viewpoint on the newer roses.

To those who are reporting for the first time we extend a very warm welcome. The Society extends to the thirty-seven contributors this year its sincere appreciation and thanks.

LIST OF CONTRIBUTORS

(with Name, Address, Nature of Soil and Sun Exposure)

Anderson, Mr. A. M., 78 Cheritan Avenue, Toronto 12, Ont.: clay loam; full sunshine to partial shade.

Antoft, Mrs. O. H., Kentville, N.S.: sandy loam; full sunshine to partial shade.

Baillie, Mrs. J. H., 89 Burnhamthorpe Road, Islington, Ont.: heavy clay; full sunshine.

Bernard, Mr. J. C., 807 Chapman Blvd., Ottawa 1, Ont.: sandy loam; full sunshine (shade for two hours).

Billington, Mr. E., 3170 Kingston Road, Scarborough, Ont.: clay loam; heavy shade.

Borland, Mr. W. G., 418 New Birks Building, Montreal 2, Que.: light loam; partial shade.
Buchanan, Mr. W. C., 189 Park Street, Sydney, N.S.: sandy loam; full sunshine to partial shade.
Burkhart, Dr. J. M., 3146 South Moore, Olympia, Wash., U.S.A.: loamy sand, full sunshine to one-half shade.
Cadsby, Mr. M. A., 28 Hilltop Road, Toronto, Ont.: clay loam; sunny to partial shade.
Clark, Mr. R. A. M., Box 263, Saranac, Mich., U.S.A.: sandy loam; eight hours sunshine.
Cross, Mr. H. C., 702 Churchill Place, Baie d'Urfe, Que.: clay loam; full sunshine.
Culver, Mr. G., 88 Holwood Avenue, Toronto 15, Ont.: clay loam; full sunshine.
Davis, Mr. C., 39 Yorkview Drive, Willowdale, Ont.: heavy clay soil; one-half to two-thirds sun.
Ferguson, Mrs. R. M., P.O. Box 254, St. Paul L'Ermite, Que.: clay loam; full sunshine.
Goulding, Mr. F. E., 38 Berkinshaw Crescent, Don Mills, Ont.: clay loam, full sunshine.
Grant, Mr. E. N., 1282 Connaught Drive, Vancouver 9, B.C.: heavy clam loam; partial shade.
Haslett, Mr. A. J., 108 Johnston Ave., Willowdale, Ont.: clay loam; full sunshine.
Heideman, Mrs. A. H., 373 Park Street North, Peterborough, Ont.: improved sandy loam; sun for seven hours.
Jubien, Mr. E. B., 150 Vivian Avenue, Montreal 16, Que.: garden loam with a little clay; full sun.
Kallen, Mr. K., 3549 W. 61st Street, Chicago 29, Ill., U.S.A.: black loam with a clay base; full sun (some parts) 8 hours sun in the others.
Keenan, Mr. W. J., 107 Cortleigh Blvd., Toronto 12, Ont.: clay loam; full sunshine to partial shade.
Lawton, Mr. J. W., 1179 Princess Avenue, London, Ont.: sandy loam; full sunshine.
Lea, Dr. R. G., 1 Green Street, Charlottetown, P.E.I.: clay loam; partial shade.
MacDonald, Mrs. W. M., 174 Baltimore Road, Winnipeg 13, Man.: black clay loam; full sun.
McNeill, Mr. W. J., 145 Roxborough Street, Oshawa, Ont.: heavy clay; full sunshine.
Martindale, Mr. P., 30 Argyle Crescent, St. Catharines, Ont.; enriched clay loam; full sun.
Meiklejohn, Mrs. A. B., 135 Bombay Avenue, Downsview, Ont.: clay loam; full sun.
Miles, Mr. A. A., 29 Lincoln, St. Catharines, Ont.: hard yellow clay overlaid with six inches of clay loam; full sun.
Mitchell, Mr. Emerson, 1557 Bruce Avenue, Windsor, Ont.: clay enriched loam; full sunshine and partial shade.
Morrison, Mrs. G., Tara, Ont.: clay; six hours sun and partial shade in late afternoon.
Moyle, Dr. C. T., 12 Forsythe Place, Hamilton, Ont.: heavy clay, partial shade.
Murdoch, Mrs. R. E., 2785 Crescent View Drive, North Vancouver, B.C.: sandy loam; full sunshine.
Parker, Mr. F. N., Mount Sicker Road, Westholme, Vancouver Island, B.C.: heavy clay; full sun.
Rogalski, Mr. F. H., 6980 Fairwood, Dearborn 6, Mich., U.S.A.: sandy loam; climbers partial shade, others full sun.
Selwood, Mr. Archie, 1450 West 40th Avenue, Vancouver 13, B.C.: gravelly sandy loam; full sunshine to partial shade.

Westbrook, Mr. H. C., 48 Prospect Avenue, Port Arthur, Ont.: clay loam; full sunshine to partial shade.
Wilson, Mr. C. T., 80 Ellerslie Avenue, Willowdale, Ont.: compost enriched loam; full sun and part shade.

The following abbreviations apply throughout: Plants — pls.; Years — yrs.; Climbing — Cl.; Floribunda — Fl.; Grandiflora — Gr.; Hybrid Eglanteria — H.Eg.; Hybrid Moschata — H.M.; Hybrid Spinosissima — H.Sp.; Hybrid Tea — H.T.; Large-flowered Climber — L.C.; Rambler — R.; Rosa Kordesii — R.Kor.; Shrub — S; Miniature — Min.

AIDA, H.T. (Mansuino. Int. J. & P. '56). Rose-red. Mr. Billington (1 pl.; 1 yr.; 30 in.) reports that the plant was slow in getting started — however fall growth was excellent. He is fond of the colour of the blooms. Mr. Clark (1 pl.; 5 yrs.; 42 in.) and Mr. Westbrook (1 pl.; 2 yrs.; 30 in.) advise that while this variety is disease resistant, the bloom production is poor. Mr. Parker (1 pl.; 1 yr.; 36 in.) is not impressed.

ALCHYMIST, S. (Kordes '56). The colour of the bloom is a deep apricot, suffused orange writes Mr. Buchanan (1 pl.; 3 yrs.; 8 ft.) the plant made excellent growth this year and had an immense amount of bloom — appears to be hardy.

ALEXANDER VON HUMBOLDT, Cl. (Kordes '60). Mr. Buchanan (1 pl.; 1 yr.; 5 ft.) states this is a very good red climber — good growth with one cycle of bloom — needs another year to judge properly.

ALISON WHEATCROFT, Fl. (Int. Wheatcroft Bros. '60). Deep apricot, edged and flushed with crimson. Mr. Buchanan (4 pls.; 1-3 yrs.) is very enthusiastic about this rose, calls it a 'very striking floribunda' — deeper colour than 'Circus' and has better growth — hardy.

ALLGOLD, Fl. (LeGrice '57). The best yellow floribunda to date enthuses Mrs. Antoft (21 pls.; 1 yr.; 30 in.) 'at last one that holds its colour' — an excellent bloomer with dark healthy foliage. Mr. Cadsby (1 pl.; 1 yr.), Mr. Jubien (3 pls.; 2 yrs.; 24 in.), Mr. Lawton (1 pl.; 2 yrs.; 16 in.), Mr. Mitchell (2 pls.; 4 yrs.; 38 in.), Mr. Parker (3 pls.; 1-3 yrs.; 24 in.) all agree with Mrs. Antoft that this is the best yellow floribunda. Mr. Cadsby had very little autumn bloom. Mr. Lawton would like more blooms — blooms are on single stems. Mr. Jubien's plants were very hardy in an exposed situation. Mr. Mitchell and Mr. Parker had continuous bloom on excellent plants. Mr. Martindale (1 pl.; 2 yrs.; 24 in.) advises: upright growth with glossy green foliage — disease free — performance excellent. Mr. Miles (2 pls.; 2 yrs.; 40 in.) comments that plants are very hardy and never out of bloom, however individual blooms are short lived — the petals drop cleanly, his closing comment: 'A Jewel'. Mr. Selwood (1 pl.; 1 yr.; 36 in.) reports: Foliage, form and colour very good — holds its form well. In Dr. Moyle's garden (1 pl.; 2 yr.; 36 in.) this variety was vigorous and hardy with blooms that held their colour. Mr. Buchanan (9 pls.; 3-4 yrs.; 36 in.) is satisfied with the bloom production. Mr. Cross (1 pl.; 2 yrs.) had some nice blooms this year, likes the fine colour.

AMA, Fl. (Kordes '55). Deep scarlet. Mr. Buchanan (12 pls.; 1-3 yrs.; 40 in.) notes that this variety is very floriferous and that the flowers last well. (Last year for reporting this rose).

AMERICANA, H.T. (Boerner '61). Bright red. Mr. Bernard (1 pl.; 1 yr.; 30 in.) had very well formed blooms on a disease-resistant plant. Mr. Clark (1 pl.; 1 yr.; 26 in.) reports: a disease free plant slightly branching with dark green foliage — blooms are exhibition type held on stiff stem, colour non-fading — 'could have more bloom'. Mr. Martindale (1 pl.; 1 yr.; 30 in.) states

this variety looks promising — upright growth habit with good foliage — blooms have no fragrance, some split centres. Mr. Miles (1 pl.; 1 yr.; 40 in.) plant was seldom out of bloom — flowers long lasting — worth growing.

ANGELA, Fl. (Kordes '57). Yellow shaded crimson. Mr. Lawton (1 pl.; 3 yrs.; 24 in.) reports fair growth — good healthy foliage — bloom production above average — flowers bright and colourful in clusters and held on strong stems.

ANGEL WINGS, H.T. (Lindquist '58). Cream, edged pink. Mrs. Murdoch (1 pl.; 2 yrs.; 48 in.) advises: 'still class this lovely rose as a decorative' — smallish fragrant blooms last for days which is wonderful for the Rose Shows — growth both tall and compact. Mr. Parker (2 pls.; 2 yrs.; 36 in.) and Mr. Selwood (1 pl.; 2 yrs.; 48 in.) agree as to the fragrant qualities of this variety. however state that the bloom is too thin to be a first class exhibition rose. Mr. Clark (1 pl.; 2 yrs.; 18 in.) had little growth and few blooms this year. Mr. Jubien (1 pl.; 2 yrs.; 48 in.) reports variety is hardy and disease resistant — quality of bloom good but bloom production only fair. Mr. McNeill (2 pls.; 2 yrs.; 32 in.) advises variety has very healthy growth — blooms have excellent form — colour very poor.

ANNA WHEATCROFT, Fl. (Tantau '58). Light to deep vermilion. Mr. Buchanan's (5 pls.; 1-3 yrs.; 48 in.) plants put on a terrific show this year, each cluster being heavy with bloom. The writer's (3 pls.; 1 yr.; 30 in.) plants were healthy and made excellent growth — while the quantity of bloom was only fair, the quality of the flowers which are single was outstanding.

ARDELLE, H.T. (Eddie. Int. Harkness & Wyant '57). Creamy-white. Mr. Cadsby (1 pl.; 1 yr.) reports: vigorous growth, quite tall — good bloom production, has too many split centres, otherwise exhibition quality. This was a good year for all our Ardelles is the report of Mr. Clark (3 pls.; 1-2-4 yrs.: 36 in.) less blackspot — free blooming — long lasting good blooms — fewer split centres — exhibition type rose. Not for our climate (Vancouver) comments Mr. Selwood (1 pl.; 5 yrs.) balls badly and has too many split centres.

ARLENE FRANCIS, H.T. (Boerner '57). Golden yellow. This rose has been outstanding in its first year for Mr. Jubien (1 pl.; 1 yr.; 54 in.) excellent growth — good bloom production with excellent blooms — disease resistant. Mr. Selwood (1 pl.; 3 yrs.; 48 in.) mentions the good yellow colour of the bloom, which is fragrant, with the fault of being too loose petalled.

ASCHERMITTWOCH, L.C. (Kordes '55). Mr. Buchanan (1 pl.; 3 yrs.: 6 ft.) dislikes the colour — pale lavender fading white and is therefore discarding the plant.

ATLANTIC, H.T. (Gaujard '56). Mr. Buchanan (5 pls.; 1 yr.; 16 in.) reports that the flower is single, colour being deep red — in the dry summer (Nova Scotia) there was not much growth, therefore will report next year.

AUDIE MURPHY, H.T. (Lammerts '57). Cherry-red. This variety looks very promising to Mr. Jubien (1 pl.; 1 yr.; 36 in.). Medium bushy growth — resistant to disease — fairly free bloomer. Mr. Lawton (1 pl.; 4 yrs.; 30 in.) considers this strictly a bud rose — blooms are too thin and open too fast — healthy plant.

AZTEC, H.T. (Swim '57). Orange-red. Mrs. Antoft (8 pls.; 1 yr.; 36 in.) comments: Rose inclined to sprawl — blooms well and is fragrant — disease resistant. Dr. Burkhart (3 pls.; 3 yrs.) gives it poor marks as to hardiness — plant sprawls and has few blooms. Not to be recommended on its first year performance states Mr. Cadsby (1 pl.; 1 yr.) sprawls all over ground. Mr. Clark (1 pl.; 6 yrs.; 22 in.) likes the brilliant colour and perfect form — slightly sprawling — disease resistant. Mr. Kallen (1 pl.; 4 yrs.; 24 in.) is in

agreement with Mr. Clark with the comment, foliage is dark green and clean. For Mrs. Meiklejohn (1 pl.; 3 yrs.; 24 in.) it is disease resistant with clean glossy foliage — well formed blooms, not too numerous — sprawls. Mrs. Murdoch (2 pls.; 3 yrs.; 48 in.) is enthusiastic about the lovely form of the bloom and also the colour which makes this variety a must. Caution — do not prune hard — if pruned to an inside bud won't sprawl. Mr. Selwood (1 pl.; 3 yrs.; 30 in.) advises: sprawls badly if pruned hard — excellent form and colour — not a free bloomer. For Mr. Westbrook (1 pl.; 3 yrs.) it proved to be a failure.

BABY BETSY McCALL, Min. (Morey '60). Pearl-pink. Mr. Clark (1 pl.; 2 yrs.; 5 in.) advises: best miniature of last year failed to perform this year. Mr. Rogalski (2 pls.; 1 yr.; 10 in.) reports: blooms of perfect form — floriferous — good foliage. Mr. Wilson (5 pls.; 1 yr.; 10 in.) rates this as his top miniature in 1961 — lovely buds of fine form, many petaled — blooms generous, three on a stem or individual — foliage thick, fine, deep colour.

BABY MASQUERADE, Min. (Tantau, Int. J.P. '56). Two-toned red and yellow. An excellent miniature comments Mr. Clark (1 pl.; 3 yrs.; 11 in.). Increased bloom production this year — blooms colourful. Mr. Parker (1 pl.; 1 yr.; 18 in.) reports a bushy plant that bloomed well. Mr. Rogalski (6 pls.; 3 yrs.; 22 in.) advises: tall grower with abundance of bloom — will blackspot. For Mr. Wilson (1 pl.; 4 yrs.; 12 in.) it is an upright grower being very generous with its blossoms which are mostly in large clusters, mentions that it is an excellent miniature grown on its own roots.

BACCARA, H.T. (Meilland. Int. C.-P. '57). Bright deep vermilion. For Mrs. Heideman (1 pl.; 1 yr.; 30 in.) this rose has everything but fragrance — free blooming — flowers do not fade — good foliage and excellent stamina. Tall grower that constantly bloom all summer advises Mr. Cadsby (1 pl.; 1 yr.; 60 in.) blooms are a rather harsh colour — however are very long lasting. Mr. Bernard's (1 pl.; 2 yrs.; 36 in.) plant was disease resistant and had abundant blooms. Mrs. Murdoch (2 pls.; 2 yrs.; 60 in.) reports: this decorative rose lasts well as a cut bloom — the colour is eye-catching and visitors to the garden all love it — has one fault it mildews badly. A long lasting dark red that is upright and vigorous is the comment of Mr. Rogalski (1 pl.; 2 yrs.; 42 in.). It was a tall grower for Mr. Westbrook (2 pls.; 3 yrs.; 45 in.) with healthy foliage — blooms small suitable for decorative work — 'Has its place but not worth repeating'. Mr. Buchanan (1 pl.; 1 yr.; 12 in.) requires another year to evaluate — had poor growth and only two flowers.

BAD NEUENAHR, R. Kor. (Kordes '58). Deep carmine is the description given to this rose by Mr. Buchanan (3 pls.; 2-3 yrs.; 5 ft.) good growth — second crop of bloom.

BALLET, H.T. (Kordes '58). Deep pink. Mrs. Baillie (1 pl.; 2 yrs.) still finds the colour uninteresting — plants vigorous — good foliage — good bloomer with large blooms. Mr. Bernard (1 pl.; 1 yr.; 36 in.) comments on the beautiful foliage — disease resistant — very floriferous. The colour is a pink Mr. Buchanan likes (6 pls.; 1-3 yrs.; 30 in.) abundant bloom — blooms of exhibition form — fragrant — 'needs feeding'. Dr. Burkhart (6 pls.; 3 yrs.) reports: quality of bloom excellent but few in quantity — while foliage was good, resistance to disease proved to be only fair — not exactly hardy. Mr. Cadsby (1 pl.; 3 yrs.) still thinks this variety is over-rated. The plant in the garden of Mr. Cross (1 pl.; 2 yr.) barely survived the first winter. Mr. Jubien (3 pls.; 2 yrs.; 42 in.) is sold on this rose — disease resistant and hardy — good bloomer with blooms that are excellent. A splendid bedder, states Mr. Mitchell (53 pls.; 2-3 yrs.; 30 in.) good blooming qualities — moderate size — ideal form. Mr. Parker (4 pls.; 2 yrs.; 36 in.) and Mr. Selwood (1 pl.; 2 yrs.; 30 in.) agree that this variety is a prolific bloomer — blooms having good form — for Mr. Selwood it is fragrant, whereas Mr. Parker states lack of fragrance

is its greatest fault. My favourite deep pink, enthuses Mr. Westbrook (5 pls.; 2-3 yrs.; 30 in.) blooms long lasting and beautifully formed — a good exhibition variety — growth tall and well covered with foliage — plant winter hardy (Head of the Lakes).

BELLE BLONDE, H.T. (Meilland '55). Outstanding colour, yellow with a touch of orange, writes Mr. Buchanan (2 pls.; 4 yrs.; 30 in.) good growth — in bloom all season. Mr. Cadsby (1 pl.; 3 yrs.) advises that this plant finally produced excellent exhibition blooms in 1961, slow to establish but worth waiting for. Mr. Kallen (1 pl.; 2 yrs.; 20 in.) would like more stem to compliment the good blooms of exhibition quality. One of the better yellows, states Mr. Rogalski (1 pl.; 1 yr.; 30 in.) has a lot of bloom and good foliage. Mr. Westbrook (1 pl.; 2 yrs.; 24 in.) has found that this variety can not take too much winter — growth bushy, not very tall — bloom open too quickly. *(Last year for reporting this rose.)*

BELLINA, Fl. (Von Abrams '61). Form in bud and flower good, reports Mr. Selwood (1 pl.; 1 yr.; 30 in.) compact plant — healthy foliage.
BETSY McCALL, Fl. (Boerner '56). Shrimp-pink. Betsy hasn't changed from last year comments Mr. Clark (1 pl.; 5 yrs.; 18 in.) beautiful abundant bloom in the spring, then she vacations all summer and fall — no disease. Mr. Selwood (1 pl.; 1 yr.) advises: nice pink colour — large clusters — free flowering.

BINGO (Dyna in Europe) H.T. (Robichon; Int. Ilgenfritz '55). Cardinal red. Mr. Bernard (2 yrs.; 2 pls.; 28 in.) reports beautiful blooms that are fragrant — some black spot. *(Last year for reporting this rose.)*

BIT O'SUNSHINE, Min. (Moore '56). Yellow with abundance of bloom, reports Mr. Rogalski (3 pls.; 2 yrs.; 15 in.) foliage good, also growth. Mr. Wilson (5 pls.; 1-4 yrs.; 14 in.) comments: large for a miniature but still the best yellow — bushy growth — large semi-double blossoms which are short lived — floriferous. Mr. Anderson (2 pls.; 1 yr.; 8 in.) advises plant made slow growth. Mr. Clark's plant failed to survive the winter.

BORDER BEAUTY, Fl. (de Reuter '57). The colour is a light red, reports Mr. Buchanan (12 pls.; 1-3 yrs.; 30 in.) on plants which are never without bloom — evenly spaced clusters.

BORDER CORAL, Fl. (de Reuter '57). Colour is a deeper 'Fashion' comments Mr. Buchanan (6 pls.; 3-4 yrs.; 40 in.) very double blooms in trusses 18 inches across — terrific bloomer.

BRENNENDE LIEBE (Burning Love) Fl. (Tantau '56). Rich scarlet, Mr. Buchanan (2 pls.; 2 yrs.; 36 in.) reports — plants are in bloom at all times — trusses are well spaced. The writer's (2 pls.; 1 yr.; 40 in.) plants were bushy and vigorous — disease resistant — blooms not over abundant.

BROCADE, H.T. (Combe '60). Mr. Kallen (2 pls.; 2 yrs.; 30 in.) recommends this new rose — very appealing colour that reminds him of a smaller version of 'Perfecta' — not enough petals for a good exhibition rose.

BRONZE MASTERPIECE, H.T. (Boerner '60). Burnt orange. Mr. Miles (1 pl.; 1 yr.; 41 in.) reports upright growth — strong stems — no disease — good blooms that last longer than most yellow and orange varieties.

BROWNIE, Fl. (Boerner '59). In the opinion of Mr. Parker (2 pls.; 1-2 yrs.; 12 in.) this variety is of novelty value only — dwarf bush — bloom of light tan shade violet — no disease.

CAFE, Fl. (Kordes '56). Coffee with cream. Has intense fragrance and good foliage states Mr. Parker (3 pls.; 3-4 yrs.; 30 in.) full loose blooms freely produced — controversial rose in his garden.

CANDY CANE, Cl. Min. (Moore '58). Blooms are red and white striped but lack abundance, comments Mr. Rogalski (1 pl.; 3 yrs.; 48 in.) good foliage. It improved in Mr. Clark's (1 pl.; 3 yrs.; 36 in.) garden this year — had more bloom. Found the striped blossoms interesting.

CASCABEL, Fl. (Dot '57). Mr. Buchanan (7 pls.; 1-3 yrs.; 30 in.) advises older plants made made good growth — large supply of light crimson flowers in good sized trusses.

CHAMPS ELYSEES, H.T. (Meilland '57). Bright crimson-red. Mrs. Heideman (1 pl.; 1 yr.; 24 in.) reports a free blooming rose — beautiful form and fragrant — compact growth. Mr. Buchanan (1 pl.; 1 yr.; 18 in.) likes the colour — needs another year before making a complete report.

CHANELLE, Fl. (McGredy '59). Peach pink overlaid rose pink. Mr. Culver (1 pl.; 2 yrs.) reports: healthy vigorous grower, low spreading type — shy bloomer. Mr. Cadsby (1 pl.; 1 yr.) was not impressed with the colour, states rose has little appeal — fair growth and repeat bloom.

CHANTECLERC, Fl. (Gaujard '56). For Mr. Buchanan (2 pls.; 3 yrs.; 30 in.) the colour is scarlet that lights up the spot the plants are in — good grower — free bloomer.

CHANTRE, H.T. (Kordes '58). Deep orange. Mr. Bernard (1 pl.; 1 yr.; 24 in.) reports that while this variety had beautiful flowers, it is a very shy bloomer — glossy foliage — disease resistant. A magnificent grower enthuses Mr. Buchanan (8 pls.; 1-3 yrs.; 30 in.) floriferous — good exhibition bloom — fragrant — no disease. An unusual and fascinating colour advises Mr. Cadsby (1 pl.; 1 yr.) bloom opens too quickly, but will keep for its colour alone. Dr. Lea (2 pls.; 4 yrs.; 30 in.) had scarce bloom production, otherwise quite satisfactory. Mr. Miles (1 pl.; 1 yr.; 36 in.) upright growth somewhat spindly — disease resistant — attractive bud that opens too quickly — spent blooms look untidy. Not a heavy bloomer comments Mr. Mitchell (2 pls.; 4 yrs.; 32 in.) long pointed buds opening to well formed double flowers. Mr. Parker (3 pls.; 2 yrs.; 36 in.) had satisfactory production — long buds with good sharp fragrance — inclined to blackspot and mildew. Mr. Westbrook (1 pl.; 1 yr.; 36 in.) is not impressed — growth good, foliage healthy — buds are huge but never open — will give it one more year.

CHERRY GLOW, Gr. (Swim '59). Mr. Jubien (1 pl.; 1 yr.; 18 in.) reports: bi-colour red and yellow — poor growth — bloom quality and quantity poor — disease resistant.

CHRISTIAN DIOR, H.T. (Meilland '58). Crimson-red. Best red bloom so far comments Mr. Westbrook (4 pls.; 1-2 yrs.; 45 in.) plant very tall and grows fast — foliage sparse but healthy — winter hardy — excellent for exhibition. It is also the best of the newer reds for exhibition advises Mr. Buchanan (4 pls.; 1-2 yrs.; 30 in.) form good — colour outstanding — blooms of heavy substance carried on thick stems — growth compact — no disease. While the quality of the bloom was excellent for Dr. Burkhart (3 pls.; 2 yrs.) he found it to be subject to mildew — not entirely hardy. It was a disappointment to Mr. Cadsby (1 pl.; 1 yr.) because of scanty bloom and absence of fragrance. 'An exhibitor's delight' is the opinion of Mr. Culver (2 pls.; 1 yr.) vigorous growth — floriferous — flowers with high pointed centres on sturdy stems. For Mr. Jubien (1 pl.; 2 yrs. 54 in.) this variety lives up to its advertising claims — had continuous bloom — tall growth — hardy — no disease. Mr. Mitchell (2 pls.; 1 yr.; 18 in.) had beautifully formed large dark red blooms — 'impressive in first year'. Mr. Parker (2 pls.; 1-2 yrs.; 48 in.) tall bush — wood thin but bloom does not nod — good exhibition form — one fault no fragrance. Mrs. Murdoch's (1 pl.; 2 yrs.; 24 in.) weak plant still hangs on — only two blooms this year — non-fading colour. Your editor's (2 pls.; 1 yr.; 36 in.) had wonder-

ful growth after a slow start — clean disease free foliage — blooms of exhibition quality are long lasting — not enough bloom. Looks like a fine exhibition rose comments Mr. McNeill (1 pl.; 1 yr.) blooms of good form — some blackspot — ordering more.

CIRCUS, Fl. (Swim '56). Yellow marked pink, salmon and scarlet. Mr. Billington (1 pl.; 4 yrs.; 24 in.) likes this variety, believes it is worthy of a place in any garden — winter hardy — reasonably resistant to disease. Mr. Borland (1 pl.; 6 yrs.) reports: vigorous growth — always in bloom — no disease. This rose has not been kind to Mr. Clark (1 pl.; 6 yrs.; 10 in.) no growth — hardly any bloom. For Mr. Cross (1 pl.; 2 yrs.) it is not floriferous, but develops attractively. A favourite of Mr. Kallen's (1 pl.; 4 yrs.; 30 in.) even though it is susceptible to mildew and blackspot — foliage dark green and shiny — 'a great floribunda that has colour plus'. Mr. Lawton's five year old plant winter killed — new plant grew quite slowly — had few blooms — these however were good form and colour. An excellent floribunda states Dr. Lea (3 pls.; 3 yrs.) growth short, bushy and vigorous — almost continuous bloom — flowers long lasting — very hardy and disease resistant. For Mrs. Morrison (1 pl.; 3 yrs.; 26 in.) the bloom was colourful but not plentiful — not robust or outstanding. A good variety free blooming and fragrant, comments Mr. Parker (3 pls.; 6 yrs.; 30 in.). Mr. Selwood (2 pls.; 2-5 yrs.; 30 in.) writes: vigorous healthy plant — intermittent bloom — fairly quick repeater.

CLARE GRAMMERSTORF, Fl. (Kordes '57). Light yellow. Mr. Buchanan (13 pls.; 3-4 yrs.; 66 in.) states that the growth of this variety is too strong and tall to be classed as a floribunda — large quantity of bloom all summer — wonderful for a hedge.

CLEOPATRA, H.T. (Kordes '55). Scarlet, yellow reverse. Mr. Bernard (1 pl.; 1 yr.; 20 in.) excellent foliage — disease resistant — few blooms but colourful — ordering more stock. Mr. Buchanan (2 pls.; 3 yrs.; 24 in.) strong growth — bushy plant — blooms freely — one of the best of the bi-colours. Mr. Jubien (3 pls.; 2 yrs.; 42 in.) finds this the best of the bi-colours, a first prize winner — bushy growth — disease resistant foliage — good quantity of blooms — hardy (Montreal). Mr. Parker (3 pls.; 4 yrs.; 24 in.) a free blooming bi-colour — small blooms produced in clusters — good foliage — no disease. Mr. Westbrook (1 pl.; 2 yrs.; 20 in.) has a weak plant — lots of disease resistant foliage, but few blooms, which tend to split. *(Last year for reporting this rose.)*

CLIMBING ALAIN, Cl. Fl. (Roth '57). The colour is the same as, if not better than, the dwarf bush reports Mr. Buchanan (2 pls.; 6 ft.) large quantity of bloom on older plant — seems to be hardy.

CLIMBING CHRYSLER IMPERIAL, Cl. H.T. (Begonia '57). Same colour as the bush; red, advises Mr. Rogalski (1 pl.; 3 yrs.) very vigorous but no bloom — will discard. Mr. Selwood (1 pl.; 1 yr.; 12 ft.) had good blooms on a shy bloomer — fragrant — prone to mildew.

CLIMBING KORONA, Cl. Fl. (Kordes '57). Mr. Buchanan (1 pl.; 4 yrs.; 6 ft.) states the colour is a very bright red — has good climbing habit (it does not get out of hand) — has proven hardy so far.

COCKTAIL, S. (Meilland '57). The flowers are single, crimson with a yellow eye, yellow reverse, reports Mr. Buchanan (4 pls.; 2-4 yrs.; 5 ft.) plants are hardy and in bloom all season — no disease — a lovely shrub rose worthy of a trial in the garden. Mr. Cross (1 pl.; 1 yr.) advises: performed excellently first year — unusual colour.

COCOTTE, H.T. (Gaujard '57). Pastel shade of soft salmon, overshot with a pale apricot. Mr. Buchanan (4 pls.; 1-3 yrs.; 24 in.) reports vigorous growth and a good numbe rof medium sized blooms — bronze green disease free foliage — 'The best of the soft pastel coloured roses'.

COLIBRI, Min. (Meilland '59). Buff yellow. Mr. Wilson (1 pl.; 1 yr.) comments: blossom very double borne in clusters — he states that self rooting may refine some of the characteristics of this variety.

COLUMBINE, Fl. (Poulsen '56). Creamy yellow, tinged pink. Mrs. Antoft (18 pls.; 1-2-3 yrs.; 48 in.) is enthusiastic about this rose which she describes as a small refined 'Peace' — older plants very tall and vigorous — amazing amount of bloom — blooms long lasting and fragrant — dark green healthy foliage. Dr. Lea (3 pls.; 1-2 yrs.) reports: an upright bush — hardy and disease resistant — average bloom production. Mr. Lawton (1 pl.; 3 yrs.; 20 in.) has not been happy with this variety — growth poor — shy bloomer — 'blooms quite nice when you get them'. Mr. McNeill (2 pls.; 2 yrs.; 38 in.) would not be without it in his garden — excellent cut flower — nice green foliage.

CONTENTMENT, H.T. (Boerner '56). Soft pink suffused yellow. Little to recommend this one, comments Mr. Clark (1 pl.; 5 yrs.; 18 in.) lacks growth and bloom — form good until one can see the split centres.

CORALIN, Min. (M. Dot. Int. Springhill '59). An unusual coral pink in colour, states Mr. Wilson (2 pls.; 1-2 yrs.; 8 in.) blooms solitary on stem, fully double and long lasting — not over-generous in quantity but continued repeat bloom. For Mr. Bernard (2 pls.; 2 yrs.) it was a continuous bloomer.

CORAL SATIN, Cl. (Zombory, Int. J. & P. '60). Deep pink with orange shading. Looks like a coming climber is the opinion of Mr. Rogalski (1 pl.; 1 yr.; 5 ft.) glossy foliage that is extra hardy — abundance of bloom — flowers of good form and in clusters.

COUP de FOUDRE, Fl. (Hemeray Aubert '57). Red edged with black. Mr. Miles (1 pl.; 1 yr.; 42 in.) is really enthusiastic about this variety — tall upright growth — glossy bronze foliage, disease resistant — good consistent bloomer — eye catching when blooms are fully open. Mr. Parker (1 pl.; 1 yr.; 18 in.) reports: small plant in its first year — good disease free foliage — ordering more stock.

COVER GIRL, H.T. (Von Abrams '59). Mr. Cadsby (1 pl.; 1 yr.) received a poor plant — not impressed with quality of bloom.

CRI-CRI, Min. (Meilland '58). Salmon-coral. Mr. Bernard (2 pls.; 1 yr.; 16 in.) had continuous bloom on his plants — beautiful blooms somewhat larger than other miniatures. Mr. Wilson (1 pl.; 1 yr.; 20 in.) advises: blooms are large, in clusters — stems, foliage and bloom are all too coarse for a miniature.

DAME de COUER, H.T. (Lens '59). Cherry-red. A good garden rose or bedder — not exhibition, comments Mr. Mitchell (52 pls.; 1 yr.; 30 in.) heavy petals, some burning. For Mr. Cadsby (1 pl.; 1 yr.) it was a tall lanky grower — large full flowers, not having much form.

DANSE DU FEU, Cl. (Mallerin Int. E.F.R. '53 J. & P. '56). Renamed in U.S.A. 'Spectacular'. Scarlet-red. Mr. Cross (1 pl.; 1 yr.) strong growth — repeat bloomer. Mr. Lawton (1 pl.; 1 yr.; 3 ft.) good growth — foliage good and healthy — no bloom. Mr. Parker (1 pl.; 2 yrs.; 5 ft.) moved plant, therefore did not get too much growth — blooms well — is planting more. Mr. Rogalski (2 pls.; 3 yrs.; 15 ft.) foliage good on vigorous plants — plenty of bloom in the spring, does not repeat. Mr. Selwood (1 pl.; 1 yr.; 10 ft.) colourful blooms — repeats if well fed — a useful climber.

DEAREST, Fl. (Dickson '60). Strong pink shaded salmon, Mr. Baillie (1 pl.; 1 yr.) reports, plant is a tremendous bloomer with big flattish flowers — not a tall grower. Mr. Jubien (1 pl.; 1 yr.; 24 in.) finds the colour to be very nice

— growth inclined to be upright — shiny leaves disease resistant — not a profuse bloomer. The best variety Mr. Mitchell (1 pl.; 1 yr.; 26 in.) planted this year — dark healthy foliage — bud long and lightly furled — opening to a pretty bloom with delicious fragrance — continuous blooming. This was a slow starter for the writer (1 pl.; 1 yr.; 24 in.) strong growth in late summer and fall — plenty of dark green foliage — looks like a variety with a future.

DEESSE, H.T. (Gaujard '53). Mr. Buchanan (1 pl.; 1 yr.; 16 in.) advises the dry season in Nova Scotia was not to the liking of this variety — not much growth — starts with a long bud, almost pure white, developing into a bi-colour — deep pink with a silvery reverse. *(Last year for reporting this rose.)*

DIABOLO, Fl. (Gaujard '57). The flowers in immense clusters are crimson, advises Mr. Buchanan (5 pls.; 1-2 yrs.; 24 in.) plant always in bloom — petals drop cleanly and the plant is neat.

DIAN, Min. (Moore '57). Blossom soft red, very double, on individual stems, reports Mr. Wilson (1 pl.; 1 yr.; 12 in.) continuous bloom — high, well formed open bush — foliage fine. 'Well worth while'.

DICKSON'S FLAME, Fl. (Dickson '58). Scarlet flame. The first floribunda to bloom, comments Mr. Mitchell (6 pls.; 3 yrs.) improves with the years — excellent this fall. Mr. Anderson (2 pls.; 1 yr.; 25 in.) and Mr. Cadsby (1 pl.; 1 yr.) are agreed as to the small quantity of bloom in the first year. However, for Mr. Cadsby 'the colour is wonderful'. A great little rose in every way comments Mrs. Baillie (2 pls.; 3 yrs.) a little sparce in blooming — more prolific this fall. For Mr. Buchanan (6 pls.; 1-3 yrs.; 30 in.) the colour is stunning — constantly in bloom during the hot summer this year (Nova Scotia) — a good cut flower. Mr. Cross (1 pl.; 3 yrs.) had only fair performance and scarce bloom. Excellent growth and lots of bloom advises Mr. Jubien (3 pls.; 2 yrs.; 48 in.) very hardy with good foliage free of disease. Mr. Parker (4 pls.; 1-2 yrs.; 30 in.) also states variety is disease resistant — not much bloom. Mr. Westbrook's (1 pl.; 3 yrs.; 24 in.) plant had a hard time over the winter — on last year's results rates variety highly. The writer (4 pls.; 1-2 and 3 yrs.; 28 in.) agrees with Mr. Mitchell with the further comment, that blooms are long lasting either on the bush or in the house.

DOMINO, H.T. (Gaujard '56). Deep red. Mr. Buchanan (1 pl.; 2 yrs.; 24 in.) is satisfied with this one — magnificent long bud developed into a gorgeous, beautifully shaped flower.

DON JUAN, Cl. (Malandrone, Int. J. & P. '58). Dark red. Mrs. Baillie (1 pl.; 2 yrs.) reports: kills right back every winter — grows more like a shrub — grandiflora type blooms are long lasting. One of the best of the newer climbers states Mr. Buchanan (2 pls.; 1-2 yrs.; 5 ft.) older plant in bloom all season. For Mr. Mitchell (1 pl.; 2 yrs.; 6 ft.) blooms have H.T. form — good repeat performance — kills to ground cover, not hardier than climbing H.T.'s. Best red, comments Mr. Rogalski (2 pls.; 3 yrs.) always in bloom — pillar type (6 to 7 feet and 4 feet across) never on a trellis.

DORIS NORMAN, Fl. (Norman '58). Brilliant light orange scarlet. Mr. Lawton (1 pl.; 3 yrs.; 24 in.) moved his plant; growth still slow, bloom production better — blooms good, colour and shape — foliage healthy. Mr. Miles (1 pl.; 1 yr.; 42 in.) reports healthy plant — bushy growth — blooms small but long lasting — H.T. form in clusters — slight mildew. Mr. Westbrook's (1 pl.; 3 yrs.; 24 in.) plant had hard time over winter — never seemed to recover till fall — last year's results rate it highly.

DOROTHY PEACH, H.T. (Robinson '57). The buds pale yellow splashed cherry red with golden base, so advises Mr. Mitchell (1 pl.; 2 yrs.; 24 in.) shiny light green foliage — bloom good size — petals of good texture.

DORTMUND, R. Kor. (Kordes '55). Vivid scarlet with a white eye. Mr. Rogalski (1pl.; 2 yrs.) is most enthusiastic aboutt his variety — most attractive bush in his garden — holly like foliage — bush covered with bloom in spring. Mr. Mitchell (2 pls.; 5 yrs.; 10 ft.) comments: having vigor and tough heavy foliage it requires little care — intermittent bloom — will be widely grown when better known. For Mr. Cross (1 pl.; 1 yr.) the foliage was unusual — has promise. Was in good form all season, states Mr. Buchanan (1 pl.; 4 yrs.; 5 ft.) hardy — foliage clean. The writer (1 pl.; 1 yr.; 5 ft.) found the excellent foliage to be disease free — strong growth — blooms are single — colour a real eye-catcher. *(Last year for reporting this rose.)*

DRESDEN, H.T. (Robichon, Int. Ilgenfritz '60). White, with pink suffusion carmine rose. A rose with definite exhibition possibilities reports Mr. Kallen (2 pls.; 2 yrs.; 36 in.) has many petals and is slow opening — good foliage — only fault variance in colour. Mr. Rogalski (1 pl.; 1 yr.; 30 in.) also comments on the large exhibition type bud and bloom — blooms long lasting — leathery foliage.

DUET, H.T. (Swim '60). Light pink with dark pink reverse. A tall disease free plant with magnificent foliage, advises Mr. Clark (1 pl.; 1 yr.; 36 in.) blooms are long lasting the colour being attractive — had continuous bloom — would recommend it. For Mr. Cross (1 pl.; 1 yr.) it was a strong plant with only a few bloom — colour attractive. It made a good start in Mr. Grant's garden (1 pl.; 1 yr.; 36 in.) after a slow start, bloom production was good — blooms last very well and are non-fading — no disease — lacks fragrance. Mr. Jubien (1 pl.; 1 yr.; 36 in.) is not excited about the colour — bloomed well first year. Mr. Miles (1 pl.; 2 yrs.; 41 in.) reports: variety is winter hardy — never out of bloom — blooms are loose but extremely long lasting — bushy plant, disease resistant. Dr. Moyle (1 pl.; 1 yr.; 36 in.) comments: nothing to enthuse about.

DUKAT, R. (Tantua '55). Golden yellow. Mr. Buchanan (1 pl.; 3 yrs.; 6 ft.) comments: This is a good yellow in colour — one cycle of bloom — stiff canes and clean foliage. *(Last year for reporting this rose.)*

DUO, Fl. (Gaujard '55). Scarlet with bright yellow reverse. Clean healthy growth, advises Mr. Buchanan (1 pl.; 3 yrs.; 36 in.) vigorous — free flowering — flowers look like bunches of 'parrot tulips' — good novelty — has ordered more plants. *(Last year for reporting this rose.)*

DWARFKING (Zwerkoning in Germany) Min. (Kordes '57). Carmine. The best red miniature, comments Mr. Rogalski (2 pls.; 2 yrs.) good foliage — good form. Mr. Clark (2 pls.; 1-2 yrs.; 14 in.) reports: this variety is free flowering — non-fading blooms last well — disease free. For Mr. Anderson (3 pls.; 2 yrs.; 10 in.) it was very healthy and bloomed steadily until heavy frost.

EBONY, H.T. (Von Abrams '60). Dark red. Exciting colour, advises Mr. Selwood (1 pl.; 1 yr.; 30 in.) large glossy foliage — not a very free bloomer so far.

EL CAPITAN, Gr. (Swim '59). Cherry red. Colour and form of bud still outstanding, advises Mr. Clark (1 pl.; 2 yrs.; 36 in.) bloom production good — disease resistant — only fault being uneven growth. An excellent grandiflora enthuses Mr. Goulding (1 pl.; 1 yr.; 42 in.) a free blooming variety — well shaped buds — strong vigorous growth — excellent foliage, disease free. Dr. Moyle does not expect to keep this rose much longer. For Mr. Rogalski (3 pls.; 2 yrs.; 36 in.) it is very floriferous and has good foliage. Mr. Selwood (1 pl.; 3 yrs.; 48 in.) reports recurrent bloom — long stems on strong plant — nice colour — disease resistant.

ELEANOR, Min. (Moore '60). Mr. Rogalski (2 pls.; 1 yr.; 15 in.) regards this as a good miniature — long lasting blooms of coral pink covers the plant — clean foliage and good growth.

ELSA ARNOT, H.T. (Croll '58). Yellow — inside petals cerise pink. This is an attractive bi-colour advises Mr. Cadsby (1 pl.; 1 yr.) although flowers are small — may be a good one.

ELSINORE, Fl. (Lindquist Int. Poulsen '57). Bright scarlet. An excellent floribunda in the opinion of Mr. Anderson (9 pls.; 1-3 yrs.; 36 in.). Free blooming — healthy — does well in two hours sun. Colour lights up the garden states Mrs. Antoft (9 pls.; 2 yrs.; 30 in.) continued bloomer — disease resistant. Mr. Buchanan (3 pls.; 2 yrs.; 24 in.) has discarded as variety is no different from 'Moulin Rouge' even though it is a good grower with plenty of bloom. For Mr. Jubien (3 pls.; 2 yrs.; 42 in.) it is a top flight floribunda — very hardy — no disease — growth rather large and bushy — blooms a little later than other reds. Mr. Miles (1 pl.; 3 yrs.; 24 in.) comments: the plant he has is too laxy to grow and too afraid to die, will execute it.

FANFARE, Fl. (Swim '56). Coral to orange red, reverse yellow. Mr. Clark (1 pl.; 6 yrs.; 30 in.) advises did not repeat as well this year as most — disease free — good decorative variety. Mr. Selwood's (1 pl.; 4 yrs.; 36 in.) plant had lots of bloom in large clusters — very showy.

FANTAN, H.T. (Meilland C-P '58). Burnt orange. Mr. McNeill (2 pls.; 2 yrs.; 30 in.) comments: very poor flat bloom — colour like mud, will discard. Mr. Clark (1 pl.; 3 yrs.; 22 in.) moved his plant — some improvement noted, but still a long way to go — few blooms — form usually poor but colour is different.

FASCINATING, H.T. (Fisher '61). Blooms were gold and red on the few occasions they appeared, states Mr. Bernard (1 yr.; 1 pl.; 30 in.) foliage glossy and disease resistant — hopes it will do better next summer.

FASHIONETTE, Fl. (Boerner '55). Pinkish coral. Mr. Clark (1 pl.; 3 yrs.; 15 in.) reports: excellent in spring, quite good in the fall, however, no mid-season bloom — blooms have good form that last well — disease resistant. Continues to perform adequately advises Mr. Cross (3 pls.; 2 yrs.). Mr. Miles (1 pl.; 1 yr.; 34 in.) prefers this variety to 'aFshion' — bushy growth — dark dull green foliage disease free — charming buds and delightful bloom — good bloom production. Arrangers like it, comments Mr. Selwood (1 pl.; 2 yrs.; 30 in.) good form and colour — free bloomer — healthy. *(Last year for reporting this rose.)*

FATA MORGANA, Fl. (Kordes '57). This is a good bright orange-shaded yellow rose, writes Mr. Buchanan (2 pls.; 1 yr.; 24 in.) good bloomer for a first year plant — clean foliage — makes a bright spot in the garden.

FAUST, Fl. (Kordes '57). Golden yellow shaded orange pink. Mr. Anderson (2 pls.; 4 yrs.; 36 in.) advises: the colour is yellow which turns to an ugly red which spoils its appearance. A favourite of Mr. Buchanan (6 pls.; 3-4 yrs.; 48 in.) an exceptionally strong growing plant — needs staking — very free bloomer — some of the trusse being huge — flowers H.T. type. Mr. Parker (2 pls.; 3 yrs.; 40 in.) comments that the blooms are nice in the early stages — dislikes the pi-bald effect in the older blooms — no disease.

FIRECRACKER, Fl. (Boerner, Int. McGredy & Dickson '56). Scarlet. A free bloomer advises Mr. Selwood (1 pl.; 2 yrs.; 30 in.) single blooms — colour deteriorates to magenta.

FIRE KING, Fl. (Meilland '59). A fiery vermilion with darker shadings on the outer petals, is how Mr. Buchanan (3 pls.; 1-3 yrs.; 36 in.) describes the colour — never out of bloom — huge quantities of very double flowers. Not outstanding this year in Mr. Clark's garden (1 pl.; 2 yrs.; 30 in.) too little bloom for a floribunda — nice foliage. For Mr. Davis (1 pl.; 2 yrs.; 22 in.) it was hardy — low growing, with profuse bloom. Mr. Miles (1 pl.; 2 yrs.; 24

in.) reports: good foliage with no disease — the quality and quantity of bloom being good — expects it to be a tall outstanding variety. Gay flowers comments Mrs. Morrison (1 pl.; 2 yrs.; 34 in.) strong plant with good foliage — disease resistant.

FIRST CHOICE, Fl. (Morse '58). Fiery orange-scarlet. Dr. Moyle (1 pl.; 2 yrs.; 36 in.) is much taken with this variety, 'a must'. Mr. Miles (1 pl.; 3 yrs.; 45 in.) reports a terrific grower that is winter hardy and needs room — free flowering — slight mildew. Mr. Buchanan (3 pls.; 3 yrs.; 60 in.) is very enthusiastic about this rose, states the name is very appropriate — has ordered more stock — single flower in large clusters — needs plenty of room.

FLAMENCO, Fl. (McGredy '60). Deep salmon. Bloomed above average in its first year, states Mr. Lawton (1 pl.; 1 yr.; 14 in.) good healthy foliage — bright colour of blooms blend well with dark green foliage — blooms are long lasting in colour and substance — rain resistant.

FLAMMENTANZ, R. (Kordes '55). Crimson. Mr. Anderson (2 pls.; 2-4 yrs.; 10 ft.) reports heavy growth — healthy — blooms semi-double. Far better than the older 'Paul's Scarlet' in the opinion of Mr. Buchanan (1 pl.; 4 yrs.; 7 ft.). Semi-double blooms that are in heavy trusses, some a foot across — has ordered more. The writer (1 pl.; 1 yr.; 7 ft.) found this variety to be a strong healthy grower — plenty of blooms for a first year plant. *(Last year for reporting this rose.)*

FLASH, Fl. (Gaujard '57). Orange-yellow, shaded light pink is how Mr. Buchanan (10 pls.; 1-2 yrs.; 30 in.) describes the colour of this rose — plants are covered with flowers all summer — clean foliage, disease free.

FORT VANCOUVER, H.T. (Swim '56). Light pink, Mr. Cadsby (1 pl.; 1 yr.)comments — good grower with lots of bloom, may be suitable for exhibition. Mr. Parker (3 pls.; 2-5 yrs.; 6 ft.) reports tall growth with large well shaped blooms, freely produced — good fragrance — a little mildew. Colour is similar to 'Show Girl' advises Mr. Rogalski (1 pl.; 3 yrs.; 36 in.) good exhibition variety. Mr. Westbrook's plants have succumbed, he is not interested in replacing.

FRED STREETER, H.T. (Kordes '55). Yellow. Mr. Cadsby (1 pl.; 3 yrs.) comments: very stingy bloomer on a dwarf plant. For Mr. Cross (1 pl.; 1 yr.) it was promising, but not spectacular. Mr. Parker (3 pls.; 1 yr.; 30 in.) states: a good yellow that blooms well — some split centres — no disease — first year's performance satisfactory. Mr. Westbrook (1 pl.; 2 yrs.; 18 ins.) advises: this plant neither grew or bloomed worth anything in its second year — just another poor yellow. *(Last year for reporting this rose.)*

FRITZ THIEDEMANN, H.T. (Tantau '59). Bloom is a bright brick red, advises Mr. Mitchell (3 pls.; 2 yrs.; 32 in.) holds its colour well — good plant with healthy foliage. Mr. Goulding (1 pl.; 1 yr.; 24 in.) had only fair growth — not too prolific. Mr. Miles (1 pl.; 1 yr.; 18 in.) received a #2 bush that seems very healthy — beautiful bloom — shy bloomer in its first year — has high hopes for next year.

FUSILIER, Fl. (Morey '57). Orange-scarlet. Mr. Clark (1 pl.; 4 yrs.; 14 in.) is still disappointed with the performance — does not repeat after spring bloom. Mr. Cross (1 pl.; 2 yrs.) had a weak plant that died in the second winter. Mr. Culver (1 pl.; 2 yrs.) would never miss it from his garden — little growth and few blooms. A live floribunda colourwise, advises Mr. Kallen (1 pl.; 3 yrs.; 36 in.) would like more blooms as they are long lasting — some mildew. Mr. Miles (1 pl.; 3 yrs.; 33 in.) agrees as to it being a shy bloomer, however, blooms are very long lasting — healthy upright growth — winter hardy — would not buy again. An above average floribunda, reports Mr. Selwood (1 pl.; 4 yrs.; 36 in.) foliage good — colour good except in hot weather.

GAIL BORDEN, H.T. (Kordes. Int. J. & P. '57). Deep rose pink, reverse overcast cream. Mr. Buchanan (4 pls.; 3-4 yrs.; 30 in.), Mr. Clark (1 pl.; 4 yrs.; 28 in.), Mr. Culver (1 pl.; 2 yrs.; 40 in.) and Mr. Kallen (1 pl.; 2 yrs.; 40 in.) all agree as to the exhibition quality of the blooms. In Chicago states Mr. Kallen, it is rated 8.5. Mr. Buchanan, Mr. Clark and Mr. Culver all had good growth with fine foliage. Very winter hardy at the head of the lakes, advises Mr. Westbrook (1 pl.; 2 yrs.; 30 in.) only weakness is length of time between rounds of bloom. Mr. Borland (1 pl.; 1 yr.) reports strong upright plant disease free. Excellent in Dr. Burkhart's garden (3 pls.; 1 yr.) exception, inclined to have split centres. One of the best of the new roses states Mr. Cadsby (1 pl.; 1 yr.) had continual bloom. Still one of Mrs. Ferguson's (2 pls.; 1-2 yrs.) favourite roses — shiny green foliage — disease resistant. Mrs. Meiklejohn (1 pl.; 1 yr.; 36 in.) comments on the strong upright growth — fair bloomer — some blooms of exhibition quality. This rose requires room, is the advice of Mr. Miles (2 pls.; 3 yrs.; 53 in.) has blooms as large as 'Peace'. Has shown great improvement, writes Mr. Mitchell (1 pl.; 4 yrs.; 34 in.) a good garden rose and bedder. Will have a permanent place in Dr. Moyle's garden (1 pl.; 2 yrs.; 48 in.) good bud form — hardy. Mrs. Murdoch (2 pls.: 2 yrs.), Mr. Parker (1 pl.; 2 yrs.; 54 in.) and Mr. Selwood (1 pl.; 3 yrs.; 40 in.) all comment: too loose petaled for a good exhibition variety. Mr. Parker had very few blooms on a large free growing plant. Mrs. Murdoch discarded both plants as the floppy blooms did not warrant the work of feeding and spraying.

GARDEN PARTY, H.T. (Swim '59). Pale yellow with pink tinge. Mrs. Antoft (6 pls.; 1 yr.; 40 in.) states this rose resembles a faded and dwarfed 'Peace' — has its points for those that like pastel shades. Mrs. Baillie (1 pl.; 1 yr.) reports: good growth with healthy large blooms on strong stems 'but somehow the flower misses the boat' — form poor, some mildew. Mr. Billington (2 pls.; 1 yr.; 30 in.) is satisfied with this variety, is adding more stock. On the whole, a disappointment to Mr. Cadsby (2 pls.; 1-3 yrs.). Mr. Clark (2 pls.; 2 yrs.; 30 in.) states variance in quality of bloom is greatest fault — few perfect ones. For Mr. Cross (1 pl.; 2 yrs.) it was floriferous and vigorous. Mr. McNeill's plants (2 pls.; 1 yr.; 36 in.) made vigorous growth — some blooms of exhibition size and form. Mrs. Meiklejohn (1 pl.; 2 yrs.; 24 in.) admires the blooms, while sparse, are of good quality — foliage clean and disease resistant. Colour and form of bloom leave Mr. Miles cold (1 pl.; 2 yrs.; 42 in.) however, makes a good show in the garden — bush vigorous and spreading. Dr. Moyle (1 pl.; 2 yrs.; 48 in.) is very fond of this rose — plant vigorous and hardy — bloom not perfect when full blown. A good garden rose states Mr. Mitchell (1 pl.; 2 yrs.; 42 in.) steady bloomer — large bloom, loose build. Mr. Rogalski (2 pls.; 2 yrs.; 42 in.) agrees with Mr. Mitchell, he also advises 'will mildew'. Did much better for Mr. Selwood this year (1 pl.; 2 yrs.; 36 in.) especially as to colour. Mr. Westbrook (1 pl.; 2 yrs.; 48 in.) found this rose to be excellent except for its uninteresting colour — winter and disease hardy.

GAY PARIS, Fl. (Delbard '59). Mr. Mitchell (1 pl.; 2 yrs.; 36 in.) reports: a large bloom for a floribunda — ruby red — vigorous with heavy dark green foliage. Mr. Buchanan (1 pl.; 2 yrs.; 30 in.) is in agreement with this.

GERTRUDE GREGORY, H.T. (Gregory '57). What a magnificent yellow rose, enthuses Mr. Buchanan (15 pls.; 1-4 yrs.; 30 in.), colour holds until petals fall — most blooms exhibition size — plant hardy — foliage plentiful and clean. Mr. Parker (2 pls.; 1 yr.; 24 in.) comments: a very good yellow — fragrant — no disease. Mr. Westbrook (1 pl.; 2 yrs.; 20 in.) advises plant badly winter hit, not fair to judge this year.

GLADIATOR, L.C. (Maladrone, Int. J. & P. '55). Rose-red. Mr. Cadsby (1 pl.; 1 yr.) moved plant — has not bloomed since moving. Not a climber in

Mr. Clark's garden (1 pl.; 6 yrs.; 27 in.) the few blooms have good form and some fragrance. An excellent climber with strong canes, advises Mr. Goulding (1 pl.; 2 yrs.; 10 ft.) beautiful H.T. blooms — not prolific but very worthwhile — strong deep green foliage disease free. Mr. Rogalski (1 pl.; 3 yrs.; 12 ft.) reports it is better than a lot of hybrid teas — always some blooms on long stems — vigorous. Mr. Westbrook (1 pl.; 5 yrs.; 60 in.) buried his bush for winter protection, did not recover till very late — stems too stiff to bend over for winter protection — gives good blooms for a climber. *(Last year for reporting this rose.)*

GOLD COAST, Gr. (Robinson. Int. J. & P. '58). Golden yellow. Mr. Miles (1 pl.; 3 yrs.; 52 in.) reports tall upright healthy growth — disease resistant dull green foliage — never out of bloom — blooms fade slightly — very winter hardy — 'a very desirable variety'. Mr. Clark's plant failed to make the winter — no regrets.

GOLD CROWN (Goldkrone in Germany) H.T. (Kordes '60). Deep yellow. Mr. Cadsby reports a tall vigorous grower with handsome foliage. Mrs. Ferguson (2 pls.; 1 yr.) lost one due to frost — nice foliage — disease resistant — a really beautiful yellow. Mr. Mitchell (50 pls.; 1 yr.; 35 in.) comments on the large glossy foliage — bloom good size — could be exhibition. The writer (1 pl.; 1 yr.; 30 in.) was favourably impressed by the vigorous growth — shy bloomer in the first year — am increasing my stock.

GOLD CUP, Fl. (Boerner '57). Golden yellow. Mr. Buchanan (9 pls.) is satisfied with the performance of this variety — free blooming — good foliage. For Mr. Clark (1 pl.; 4 yrs.; 14 in.) it lacks growth and bloom. Mr. Miles (2 pls.; 3 yrs.; 37 in.) reports straggly growth — poor flower production — blooms are non-fading but have poor lasting qualities — winter hardy. Mrs. Morrison (1 pl.; 1 yr.; 22 in.) only had fair growth — foliage healthy — bloom colour good.

GOLDEN FLEECE, Fl. (Boerner '55). Buff-yellow. The soft yellow of the bloom is the only reason Mr. Clark (1 pl.; 6 yrs.; 10 in.) keeps it — low growing — too little bloom. Not a good variety states Mr. Parker (1 pl.; 5 yrs.; 24 in.). This variety improves with age for the writer (4 pls.; 5 yrs.; 24 in.) growth is erect and bushy — makes a good showing when massed — fragrant. *(Last year for reporting this rose.)*

GOLDEN GARNETTE, Fl. (Boerner '60). Golden yellow. Mr. Miles (1 pl.; 1 yr.; 17 in.) is not happy with this variety — healthy growth but small — blooms are small and fade badly — no disease.

GOLDEN JEWEL, H.T. (Tantau '59). Yellow. A low growing plant that wants to sprawl, states Mr. Buchanan (7 pls.; 1-2 yrs.; 24 in.) free blooming — makes new growth easily.

GOLDEN SHOWERS, L.C. (Lammerts '56). Yellow. Mr. Selwood (1 pl.; 3 yrs.; 9½ ft.) still likes the fine foliage and beautiful though fleeting blooms freely produced. This variety needs winter protection, advises Mr. Rogalski (2 pls.; 3 yrs.; 7 ft.) shiny foliage and always in bloom. Bloomed freely all summer for Mrs. Heideman (1 pl.; 1 yr.; 5 ft.) beautiful shiny bronzed foliage — no disease. Mr. Grant (1 pl.; 2 yrs.; 7 ft.) likes this variety and would plant more if he had room — steady bloomer and very fragrant for a climber. Mr. Cross (2 pls.; 2 yrs.) reports: continues fine performance, flowers continually till frost. A slow starter for Mr. Clark (1 pl.; 5 yrs.; 5 ft.) however each year it has improved some — makes its good growth in the fall.

GOLDEN SUN, H.T. (Golden Sonne in Germany) (Kordes '57). Golden yellow. Proved hardy in the longest cold spell in years states Mr. Buchanan (9 pls.; 3-4 yrs.; 30 in.) colour holds — no disease. Dr. Burkhart (3 pls.; 1 yr.) gives it excellent marks. Mr. Cadsby (1 pl.; 1 yr.) had poor growth —

bloom colour good. A beautiful yellow rose, comments Mrs. Ferguson (3 pls.; 2 yrs.) not a tall grower — blooms have good form. Mr. Grant (1 pl.; 1 yr.; 20 in.) is enthusiastic about the blooms — really yellow and non-fading — last well — plant disease free. Mr. McNeill (2 pls.; 2 yrs.) describes the bloom as being exhibition type — strong plants — must have more. Mr. Martindale (1 pl.; 3 yrs.; 24 in.) advises plant has somewhat spreading habit — good blooms but stems are too short. Our best yellow rose, comments Mrs. Meiklejohn (1 pl.; 2 yrs.; 20 in.) strong growth with good clean foliage. Mrs. Murdoch (1 pl.; 1 yr.) is pleased with the non-fading colour of the bloom — disease free plant is compact. Mr. Parker (3 pls.; 2 yrs.; 18-30 in.) agrees as to the non-fading quality of the bloom which has very good form — one plant good growth, two plants not much growth. Mr. Westbrook's plant was 'put to sleep'.

GOLDEN WINGS, H.T. (Shepperd '56). Single yellow that fades the second day, reports Mr. Rogalski (6 pls.; 3 yrs.; 60 in.) blooms all the time on a vigorous bush. Mr. Parker's plant (1 pl.; 2 yrs.; 48 in.) is constantly in bloom — no disease. Mr. Clark (1 pl.; 3 yrs.; 31 in.) agrees but states the size of bloom is rather small. For Mr. Cadsby (1 pl.; 3 yrs.) variety had vigorous growth — fantastic bloom. Mr. Anderson (1 pl.; 3 yrs.; 60 in.) reports healthy growth — not enough blooms in a shady position. Reporters believe it should be classed as a shrub.

GOLDMARIE, Fl. (Kordes '58). Deep yellow with light orange red edging. Strongest growing yellow floribunda yet seen, reports Mr. Buchanan (10 pls.; 1-3 yrs.; 40 in.) bush needs room, will spread to four feet — flowers are large and very double — continuously in bloom.

GRACE de MONACO, H.T. (Meilland '56). Light rose-pink. Mr. Billington (1 pl.; 3 yrs.; 36 in.) recommends this rose for its form and colour — vigorous, hardy and disease resistant. Mr. Buchanan (1 pl.; 3 yrs.; 40 in.) had good growth this year — flowers large and very fragrant. Mr. Cadsby's (1 pl.; 1 yr.) plant was slow getting started. Mrs. Heideman (1 pl.; 3 yrs.; 24 in.) finds the very large blooms to be rather coarse and inelegant. Exhibition type blooms, states Mr. Kallen (2 pls.; 2 yrs.; 30 in.) but not enough of them. Mr. Parker (1 pl.; 1 yr.; 12 in.) received a poor plant, will need a year to decide. Tends to spread, comments Mr. Rogalski (2 pls.; 2 yrs.; 42 in.) good large open blooms on strong stems. The writer (1 pl.; 1 yr.; 36 in.) was pleased with the strong upright growth and fair quantity of good blooms in its first year — no disease.

GREEN FIRE, Fl. (Swim '58). Bright yellow. Has not equaled its first year's fine performance, comments Mr. Clark (1 pl.; 3 yrs.; 10 in.) lacks the hardiness of most floribundas. Mr. Selwood (1 pl.; 3 yrs.; 36 in.) briefly advises: 'you can have it'.

HALILI, H.M. (Tantau '56). Pink on a white base. Wonderful improvement over the first year states Mr. Buchanan (1 pl.; 2 yrs.; 48 in.) continually in bloom, in fairly large clusters — plenty of new growth from the base.

HANSESTADT BREMEN, Fl. (Kordes '58). Covered all season long with flowers (double) colour being a deep rose-pink, advises Mr. Buchanan (2 pls.; 2 yrs.; 30 in.) vigorous and healthy — recommends it.

HAWAII, H.T. (Boerner '60). Orange hued coral flower. Mr. Miles (1 pl.; 2 yrs.; 54 in.) and Mr. Rogalski (1 pl.; 2 yrs.; 48 in.) like the delightful colour — blooms of good form that do not last — tall upright growth. Mr. Culver (1 pl.; 1 yr.), Mr. Haslett (1 pl.; 1 yr.; 30 in.) and Mr. Kallen (1 pl.; 2 yrs.; 48 in.) all agree that the blooms open too quickly. Mr. Kallen notes the flowers were very fragrant. Mr. Haslett had excellent growth. Mr. Culver found the growth to be rather spindly. Mr. Bernard's plant (1 pl.; 1 yr.; 36

in.) was floriferous — glossy foliage, disease resistant. Mr. Borland (1 pl.; 1 yr.) is well satisfied with first year performance. Poor showing this year, advises Mr. Clark (3 pls.; 2 yrs.; 20 in.) too few blooms form and substance poor — some blackspot. 'A winner' is how Mr. Goulding (1 pl.; 1 yr.; 36 in.) describes this variety — growth, foliage and blooms all being excellent — strong stems, good length. Mr. Jubien (1 pl.; 2 yrs.; 48 in.) likes the colour and the plant is good — only a fair bloomer. Mrs. Morrison (1 pl.; 2 yrs.; 32 in.) comments: it looks promising — foliage better in second year — bloom somewhat shaggy. For Mr. Selwood (1 pl.; 1 yr.; 40 in.) blooms rather small and mostly of poor form.

HEAT WAVE, Fl. (Swim '58). Orange-scarlet. A family favourite comments Mr. Clark (3 pls.; 2 yrs.; 20 in.) vigorous disease free plant — free bloomer — bloom of perfect form — striking colour. 'My favourite of the floribundas' is how Mr. Grant (2 pls.; 3 yrs.; 42 in.) describes this rose — very vigorous and clean — individual bloom has excellent form — makes a perfect boutonniere — colour stands up — fine for cutting. Mr. Selwood (1 pl.; 2 yrs.; 36 in.) reports: good plant — bloom vivid colour, nice form — rather slow repeater.

HEIDELBERG, S. (Kordes '58). Deep fiery red. Mr. Buchanan (1 pl.; 2 yrs.; 30 in.) had little growth in a dry season — will report next season. This is really good shrub in the opinion of Mr. Culver (1 pl.; 2 yrs.; 48 in.) dark green disease resistant foliage — blooms in June, then again in late summer and continues until frost.

HENRY MORSE, Fl. (Kordes. Int. Morse '58). Very deep crimson. The growth has been terrific, states Mr. Buchanan (15 pls.; 1-3 yrs.; 48 in.) flowers are very double and large, borne in large clusters — colour breath-taking. For Mr. Cross (1 pl.; 3 yrs.) it was 'just fair'.

HI-FI, Fl. (C. Gregory & Son '58). Brilliant orange-flame. Mr. Buchanan (6 pls.; 1-3 yrs.; 30 in.) reports: very good growth — free blooming — clusters not too heavy — very bright colour almost hard on the eyes — wonderful alongside 'Iceberg'.

HIGHLIGHT, Fl. (Robinson '57). Orange-scarlet. Always an object of interest in the garden, advises Dr. Lea (2 pls.; 2 yrs.) upright and hardy — always in bloom — flowers long lasting, very bright and showy. Mr. Miles (1 pl.; 1 yr.; 32 in.) is enthusiastic about this variety — strong healthy upright growth — free blooming — an eye catcher and a must for garden show. Dr. Moyle (1 pl.; 2 yrs.; 36 in.) reports: vigorous growth — many blooms — not fond of colour. The best of the vivid flame varieties, comments Mr. Parker (3 pls.; 3-5 yrs.; 48 in.) good foliage — no disease — colour holds well in hot weather. The writer (1 pl.; 2 yrs.; 32 in.) found it to be very winter hardy — sturdy growth — almost constantly in bloom — will purchase more stock.

HOBBY, Fl. (Tantau '55). Coral-pink. Mr. Anderson (4 pls.; 4 yrs.; 40 in.) comments: healthy — does well in half sunshine — blooms are long lasting — has ordered five more. An excellent rose that is in bloom all summer, reports Mr. Goulding (3 pls.; 3 yrs.; 36 in.) good foliage disease free — hardy — continuous prolific bloomer. *(Last year for reporting this rose.)*

HONEYMOON (Honigmond in Germany), Fl. (Kordes '60). Canary yellow. For Mr. Jubien (1 pl.; 1 yr.; 18 in.) growth was slow — a very nice soft yellow bloom, few in number — good foliage — disease resistant. Mr. Mitchell (1 pl.; 1 yr.; 30 in.) reports upright growth — not profuse. The writer (1 pl.; 1 yr.; 36 in.) found it to be a strong grower with excellent foliage — very shy bloomer.

ICEBERG, Fl. (Kordes. Int. McGredy '58). Pure white. This is certainly a delightful rose enthuses Mrs. Baillie (1 pl.; 2 yrs.) never without its well shaped blooms — have increased planting. Still my favourite white floribunda, advises

Mrs. Ferguson (10 pls.; 1-2 yrs.; 25 in.) free bloomer — some blackspot. This is a terrific rose states Mr. Jubien (3 pls.; 2 yrs.; 48 in.) even in Montreal, would make a good hedge — floriferous — excellent blooms. Mr. Buchanan (1 pl.; 1 yr.; 20 in.) is withholding judgment until next year. One of the best white varieties writes Mr. Cadsby (1 pl.; 3 yrs.). Mr. Culver (1 pl.; 1 yr.) reports: continuous bloom from June till frost — blooms long lasting — well spaced on the spray — vigorous growth. Mr. Mitchell (1 pl.; 2 yrs.) reports: vigorous plant — bushy growth — bud of good form. Mr. Parker (3 pls.; 1-2 yrs.; 48 in.) is in agreement with Mr. Jubien — an excellent variety that needs room.

INVITATION, H.T. (Swim '61). Salmon pink. Mr. Rogalski (1 pl.; 1 yr.; 48 in.) reports: strong growth and good clean foliage — abundance of bloom — bloom have good form — will be seen in many shows.

ISOBEL HARKNESS, H.T. (Norman '57). Deep yellow. Mr. Billington's two plants called it a day — no regrets. Mr. Borland's (1 pl.; 1 yr.) plant made slow growth — is well satisfied so far. Mr. Buchanan (3 pls.; 3 yrs.; 24 in.) has better yellows, therefore is discarding. Best decorative yellow Mr. Clark (2 pls.; 3-4 yrs.; 30 in.) grows — riot of colour when in bloom — repeats well — never any disease — attractive bush — deep green foliage. Mr. Davis (1 pl.; 3 yrs.; 24 in.) reports: fair amount of bloom on a not too sturdy plant. Too bad she does not produce more because she is a lovely soft yellow comments Mr. Jubien (2 pls.; 2-4 yrs.; 30 in.) hardy with good foliage — not too free with blooms — blooms excellent. Mr. Parker (1 pl.; 3 yrs.; 30 in.) agrees it is not a free bloomer — colour good — blooms too thin and do not last. For Mr. Selwood (1 pl.; 4 yrs.; 36 in.) it has good foliage and plant habit — too loose in the petals. Mr. Westbrook (1 pl.; 4 yrs.; 48 in.) advises: an excellent yellow garden rose — good tall growth with disease resistant foliage — bloom non-fading and with a few more petals would be one of the best. The writer (2 pls.; 3-4 yrs.; 36 in.) is in agreement with Mr. Westbrook.

IVORY FASHION, Fl. (Boerner '58). Ivory-white. Mrs. Baillie (1 pl.; 2 yrs.) will discard — sparse bloomer — not very interesting. Mr. Cadsby (1 pl.; 3 yrs.) growth and bloom not satisfactory. Mr. Clark (1 pl.; 3 yrs.; 14 in.) agrees with Mr. Cadsby and adds — only blooms in the spring, does not repeat. Still one of Mrs. Heideman's (4 pls.; 3 yrs.; 24 in.) favourite roses — colour and form elegant in all stages of bloom — blooms more freely every year. Mr. Kallen (1 pl.; 1 yr.; 24 in.) likes the bloom, however, not enough of them — plant stands still. For Mr. Lawton (1 pl.; 2 yrs.; 20 in.) plant is healthy — good foliage — delightful in bud — open bloom a little thin — nice colour — would like more bloom. Mr. Miles (1 pl.; 2 yrs.; 43 in.) tall upright growth — winter hardy — glossy dark green foliage — no disease — well formed bud and pleasing when in full bloom. Dr. Moyle (1 pl.; 3 yrs.; 18 in.) had very few blooms, will keep another year.

JAZZ, Fl. (de Ruiter '60). Light red with light cream reverse is how Mr. Buchanan (6 pls.; 1 yr.; 30 in.) describes the colour of this rose — growth was good — foliage dark green and healthy — 'Expect great things next year'.

JEANIE, H.T. (Eddie. Int. Wyant '58). Cream to pink. Not free blooming advises Mr. Clark (1 pl.; 3 yrs.; 20 in.) disease resistant. Mr. Lawton (1 pl.; 3 yrs.; 24 in.) reports slow growth — healthy — blooms nice when you get them, which is not often — no improvement over last year. For Mr. Rogalski (1 pl.; 3 yrs.; 48 in.) a vigorous bush that always has some bloom — a good garden rose that will blackspot.

JERRY DESMONDE, H.T. (Norman '59). Pink. Mr. Cadsby (1 pl.; 1 yr.) advises: variety has possibilities — few blooms. Colour like 'Show Girl' but more petals, comments Dr. Burkhart (2 pls.; 1 yr.) balls in wet weather. Mr. Miles' (1 pl.; 1 yr.; 37 in.) plant was a slow starter — very shy bloomer —

blooms very double — no disease. Mr. Westbrook (1 pl.; 2 yrs.; 30 in.) reports a tall compact plant — very few blooms — will give it another year.

JOLIE MADAME, H.T. (Meilland '58). Red blend. Mr. Buchanan (2 pls.; 2 yrs.; 24 in.) reports: foliage dark healthy green — large blooms of exhibition size — good fragrance.

JUNE BRIDE, Gr. (Shepperd '57). Creamy white. Variety not outstanding, states Mr. Clark (1 pl.; 5 yrs.; 15 in.) insufficient growth and bloom. Mr. Cadsby (1 pl.; 1 yr.) reports fair growth — good blooms in early summer — none in fall. An excellent variety for Dr. Lea (2 pls.; 1-2 yrs.) very free blooming — no disease — only fault, balls badly in damp weather. Not a favourite of Dr. Moyle. Mr. Rogalski (1 pl.; 3 yrs.) advises plant grows up to five feet — will winterkill — foliage clean — blooms with good form and in clusters.

JUNE OPIE, Fl. (Kordes '58). Colour is cherry pink, shaded orange, advises Mr. Buchanan (2 pls.; 2 yrs.; 30 in.)an outstanding grower — foliage large for a floribunda — average sized clusters come continually on new growth.

JUNE PARK, H.T. (Bertram Park '58). Deep rose-pink. Mr. Parker (4 pls.; 1 yr.; 24 in.) had satisfactory production for the first year — plant tends to spread — blooms have many petals and good fragrance — long lasting — foliage good — no disease.

KARLSRUHE, R. Kor (Kordes '57). Deep rose-pink. Mr. Buchanan (1 pl.; 3 yrs.; 8 ft.) advises plant spreads about eight feet — immense quantity of bloom — flowers in huge clusters — repeats — will recommend — has ordered more stock.

KASSEL, L. C. (Kordes '57). Orange-scarlet. Acts like a large shrub, but a very useful one comments Mrs. Baillie (1 pl.; 2 yrs.) a good bloomer — blooms are attractive and long lasting. Mr. Buchanan's (3 pls.; 2-4 yrs.) plants were hard hit during last winter, there was, however, good new growth — flower production not up to former years.

KOMMODORE, Fl. (Tantau '54). Very deep red. Perhaps the outstanding floribunda in the garden this year states Mr. Buchanan (2 pls.; 2 yrs.; 40 in.) a large bushy grower that needs room — free blooming — flowers are double and long lasting. *(Last year for reporting this rose.)*

KONRAD ADENAUER, H.T. (Tantau '55). Carmine-red. Mr. Grant (1 pl.; 2 yrs.; 20 in.) reports: low growth — shy bloomer — good colour and fragrant — wont' open in dull weather. It produced some excellent exhibition blooms for Mr. Mitchell (4 pls.; 2-4 yrs.) slightly branching — foliage medium size. Mrs. Murdoch (1 pl.; 4 yrs.; 36 in.) has discarded, the odd good bloom was not good enough — shall miss the fragrance — however, 'no regrets'. Mr. Parker (3 pls.; 1-2 yrs.; 30 in.) had satisfactory production — very full rose good for exhibition — disease resistant — fragrant. Mr. Westbrook's plant (1 pl.; 4 yrs.; 36 in.) was badly winter hit — recovered and became a bushy compact plant — fair number of good fragrant blooms — foliage is rust resistant. *(Last year for reporting this rose.)*

KORDES PERFECTA, H.T. (Kordes '57. Int. J. & P. '58). Cream tipped and then flushed crimson, suffused yellow. 1961 was a wonderful year for this rose states Mrs. Murdoch (7 pls.; 5 yrs.; 48 in.) takes about three years to get established for those top-flight blooms, free blooming with flowers that last for days. Mr. Parker (7 pls.; 3-4 yrs.; 60 in.), Mr. Selwood (2 pls.; 2-4 yrs.; 48 in.) and Mr. Westbrook (6 pls.; 3-4 yrs.; 36 in.) agree that this variety is a slow starter — however, when it starts, blooms are superb. Mr. Parker's plants were floriferous and blooms fragrant — stands up to heat or rain. Mr. Westbrook notes foliage is susceptible to rust. Mr. Buchanan (9 pls.; 3-4 yrs.; 48

in.) outstanding in 1961 dry hot summer — plants always in bloom — every flower perfect. Dr. Burkhart (30 pls.; 2-4 yrs.) plant hardy — foliage excellent and disease resistant — excellent blooms. This rose finally produced this year advises Mr. Jubien (2 pls.; 2-4 yrs.; 30 in.). Upright growth — hardy in Quebec. Mr. McNeill (4 pls.; 2-4 yrs.; 40 in.) very strong tall plants — long lasting blooms — first class exhibition variety — is not fond of the colour. Dr. Moyle (2 pls.; 3 yrs.; 60 in.) excellent rose with blooms of excellent form — hardy. Mr. Miles (2 pls.; 3 yrs.; 46 in.) reports: variety has tendency to send up shoots too late to mature — very winter hardy. A most outstanding rose in the opinion of Mr. Martindale (1 pl.; 3 yrs.; 48 in.) vigorous plant — disease resistant — awful buds, but wonderful blooms. Has been a disappointment to Mr. Lawton (1 pl.; 3 yrs.; 20 in.) growth slow and not enough blooms. One of our greatest H.Ts. today advises Mr. Kallen (2 pls.; 3 yrs.; 40 in.) upright plant — good foliage — likes the colour. In the garden of Mrs. Ferguson (3 pls.; 3 yrs.) it is one of the most admired roses — hardy, disease resistant and a strong grower. For Mr. Culver (3 pls.; 3 yrs.; 40 in.) this rose has everything but fragrance and bud form. Mr. Cross (2 pls.; 3 yrs.) gets occasional excellent bloom, not sufficient. Mr. Clark's plants (4 pls.; 3 yrs.; 18 in.) were killed back by a late frost (May 29) therefore performed poorly all year. A must for any rose grower, states Mr. Billington (5 pls.; 3 yrs.; 36 in.) winter hardy — foliage excellent and disease resistant — good exhibition blooms that are fragrant. Mr. Rogalski (3 pls.; 2 yrs.; 48 in.) advises, try growing this rose in shade for better colour — one of the best. Mrs. MacDonald (2 pls.; 1-2 yrs.) is enthusiastic about this rose — winter hardy in Manitoba — blooms are high-centred and in perfect shape for a long time — will increase planting. Dr. Lea (4 pls.; 2 yrs.) finds that it is hard to fault this rose — excellent in all respects. Mr. Davis (1 pl.; 2 yrs.; 24 in.) comments: very sparse bloom — disease resistant. Mr. Cadsby (3 pls.; 1-2 yrs.) had vigorous growth although a slow starter — notes tendency to weak necks. Mrs. Baillie (1 pl.; 2 yrs.) has still to get one of the 'breath taking blooms', however, plant growth is strong with fine foliage — good bloomer — mildews. Mrs. Antoft (17 pls.; 1-2 yrs.; 48 in.) is delighted with the fragrant blooms which have an average of 72 petals — plenty of blooms — bush vigorous with disease free foliage. 'Has caused much excitement in her garden'.

KORONA, Fl. (Kordes '55). Orange-scarlet. Mr. Kallen (1 pl.; 1 yr.; 36 in.) reports nice upright growth but few blooms — not impressed by foliage. Dr. Lea (2 pls.; 1-2 yrs.; 48 in.) considers it among the best in his garden — vigorous — tall growth — no disease — flowers long lasting. Mr. Martindale's (1 pl.; 3 yrs.; 30 in.) plant is vigorous — blooms are an outstanding colour — slow repeater — attracts mites. A striking variety states Mr. Parker (3 pls.; 2-4 yrs.; 48 in.) very effective when planted together — profuse blooms — good foliage — no disease. Mr. Westbrook)2 pls.; 1-2 yrs.; 48 in.) advises: very disease resistant and winter hardy — gives many clusters of bloom on a tall well-dressed bush. *(Last year for reporting this rose.)*

LADY ELGIN, H.T. (Thais in Europe) Meilland '57. Int. C.-P. '57). Rich light orange. Mrs. Heideman (1 pl.; 4 yrs.; 36 in.) reports a hardy rather lanky plant — colour of rare blooms is delightful. A lovely amber colour rose, states Mr. Lawton (1 pl.; 6 yrs.; 34 in.) bloom production only fair (would order more plants if it bloomed a little more) good foliage. Mr. Martindale's plant (1 pl.; 4 yrs.; 54 in.) was vigorous, well foliaged and bushy — blooms of unique colour fall quickly — mildew badly. The poor quality of the cut bloom is a bit much to contend with states Mrs. Murdoch (1 pl.; 4 yrs.; 7 ft.) nice foliage — bloom a lovely colour. An attractive bush in the garden, comments Dr. Lea (1 pl.; 3 yrs.; 60 in.) free blooming — hardy and disease resistant — blooms tend to fall rapidly. Mr. Selwood (1 pl.; 3 yrs.; 60 in.) blooms well formed — nice colour — not a 'stayer' on the show bench — mildews. For Mr. Cadsby (1 pl.; 1 yr.) it is not too vigorous. Mr. Davis (2 pls.; 3 yrs.; 36 in.)

complains of sparse bloom and lack of hardiness. Mr. Grant (1 pl.; 2 yrs.; 45 in.) likes this rose, a tall and generous beauty — vigorous with some fine exhibition blooms — a little mildew. Growth not too good in its first year, states Mr. Jubien (1 pl.; 1 yr.; 30 in.) enjoys the lovely apricot shade of the flowers. Mr. Kallen (1 pl.; 2 yrs.; 36 in.) comments: good exhibition possibilities — most blooms excellent — low bloom production — good foliage — likes the colour.

LADY LUCK, H.T. (Miller, Int. Elmer Roses '56). Rich pink. A fine rose for exhibiting enthuses Mr. Kallen (2 pls.; 1 yr.; 24 in.) has good form and colour — would like more stem to the bloom. Mr. Rogalski (3 pls.; 2 yrs.; 42 in.) likes this variety which is one of the most fragrant roses — blooms have good form on strong stems — abundance of bloom on a vigorous bush.

LADY ZIA, H.T. (Park '59). Light orange-scarlet. Looks like a winner is the opinion of Mr. Cadsby (1 pl.; 1 yr.) vigorous growth with long lasting well shaped flowers. Dr. Lea (1 pl.; 1 yr.) had a small straggling bush with only a few blooms — blooms are attractive but it will have to improve to earn a permanent berth. 'This is the most healthy smallest plant I have ever grown' comments Mr. Miles (1 pl.; 1 yr.; 13 in.) fair quantity of bloom which are very beautiful — hopes he can make it grow — no disease. Mr. Westbrook (3 pls.; 1-2 yrs.; 24 in.) reports rather bushy plant that is well leafed with disease resistant foliage — blooms are real exhibition form on long individual stems — not very many per bush. The writer (2 pls.; 1-2 yrs.; 30 in.) is well satisfied with the performance of this variety — sturdy growth — exhibition form blooms — rather stingy bloomer.

LAVENDER GIRL, Fl. (Meilland. Int. C.-P. '58). One of the best of the mauve type floribundas advises Mr. Baillie (1 pl.; 1 yr.) very interesting — plenty of blooms — not a tall growing plant.

LAVENDER PRINCESS, Fl. (Boerner '59). Mr. Clark (1 pl.; 1 yr.; 13 in.) reports a low growing variety with bloom production below average — colour not clear. Mr. Lawton (1 pl.; 2 yrs.; 17 in.) thinks one plant is enough — slow growth — healthy — few blooms — he is not fond of the colour even though it is different.

LIEBESZAUBER, H.T. (Kordes '59). Mr. Bernard (1 pl.; 1 yr.; 28 in.) reports a nice well formed but small red rose — blackspots. Mrs. Ferguson's (1 pl.; 2 yrs.) plant was hardy and disease resistant — a good red is how she describes it.

LICHTERLOH, S. (Tantau '55). Velvety blood-red. Still a very good rose comments Mrs. Ferguson (1 pl.; 3 yrs.) disease resistant. *(Last year for reporting this rose.)*

LILAC TIME, H.T. (McGredy '56). Mrs. Ferguson (1 pl.; 3 yrs.) wanted to discard last year but decided to give it one more chance, has more than repaid her this summer — blooms were outstanding and very free — disease resistant. Variety does not do well for Mr. Parker (2 pls.; 5 yrs.; 24 in.) blooms are thin and fragrant. The writer (2 pls.; 1-5 yrs.; 30 in.) is still satisfied with the performance of this variety, blooms have good form and while not prolific, there is always bloom on the established plant — no disease.

LILLI MARLENE, Fl. (Kordes, Int. McGredy '59). Scarlet-red. Mr. Buchanan (5 pls.; 1-2 yrs.; 40 in.) regards this as an outstanding floribunda. Plants are always in bloom in small clusters, flowers being large and semi-double — bushes are well shaped. Still a favourite of Mrs. Ferguson (10 pls.; 2 yrs.) hardy with very strong growth and disease resistant. Mr. Goulding (1 pl.; 3 yrs.; 25 in.) reports a strong bushy plant that winters well — continuous bloom — good foliage but some late mildew.

LINDA PORTER, H.T. (Dot. Int. B. & A. '57). Clear pink. Mr. Clark (1 pl.; 4 yrs.; 21 in.) advises that while it made more growth this year, there was still little bloom.

LITTLE BUCKAROO, Min. (Moore '56). Bright red. Large for a miniature advises Mr. Rogalski (3 pls.; 2 yrs.; 12 in.) blue green foliage. Mr. Wilson (2 pls.; 1-4 yrs.; 20 in.) advises: too coarse in all respects to be considered a miniature — blossom large, semi-double, bright red with white eye.

LITTLE DARLING, Fl. (Duehrsen '56). Red-orange to rose pink, base buttercup-yellow. Mrs. Baillie (1 pl.; 2 yrs.) did not have as much bloom as she would like this year — good growth and foliage. Not as free flowering as Mr. Cadsby (1 pl.; 1 yr.) expected, will reserve judgment. While this variety had good growth on a disease free plant, it will need more bloom to satisfy Mr. Clark (1 pl.; 1 yr.; 33 in.), form and colour blend excellent. Mr. Cross (1 pl.; 1 yr.) reported fine performance — looks good. Mr. Haslett (1 pl.; 2 yrs.; 40 in.) advises: good growth and foliage disease resistant, blooms being a good colour and excellent quality. Mr. Kallen (1 pl.; 3 yrs.; 40 in.) reports good colour to bloom and fine foliage — however it does blackspot. A lovely floribunda states Mr. Lawton (1 pl.; 2 yrs.; 40 in.) tall growth with healthy bright foliage — free blooming. 'Most aptly named' is the opinion of Mr. Martindale (1 pl.; 1 yr.; 30 in.) perfect buds of H.T. form — upright and bushy — hard to find fault with this rose. Lovely for small arrangements enthuses Mrs. Murdoch (2 pls.; 2 yrs.; 36 in.) always in bloom. 'A gem well named' Mr. Parker (2 pls.; 2 yrs.; 30 in.) is also enthusiastic about this variety. For Mr. Rogalski (5 pls.; 3 yrs.; 42 in.) it is one of the better floribundas — good clean foliage — blooms of good form. Mr. Selwood (1 pl.; 4 yrs.; 44 in.) comments, charming buds and flowers — long stems and pliant growth. 'A little floppy'. Mr. Westbrook (1 pl.; 1 yr.; 45 in.) also agrees as to the excellence of this rose — likes the immaculate miniature H.T. blooms. For the writer (2 pls.; 3 yrs.; 48 in.) it is an upright sturdy grower that needs plenty of room — in a bad year for mildew it was disease resistant.

LITTLE SCOTCH, Min. (Moore '56). Much better this year reports Mr. Clark (1 pl.; 3 yrs.; 6 in.) no disease and more blooms which seemed to last better.

LIVING, H.T. (Lammerts '57). Reddish orange. Mr. Bernard (1 pl.; 3 yrs.; 36 in.) reports: continuous bloom — glossy disease resistant foliage. Colour and foliage good, states Mr. Lawton (1 pl.; 4 yrs.; 26 in.) above average bloomer — petalage is thin, blooms opening too fast and do not last. 'Strictly a bud rose'. Has done fairly well in a summer of drought, advises Mrs. MacDonald (1 pl.; 1 yr.; 24 in.) compact bush — not a free bloomer — long rest periods between bloomings — buds are well shaped, blooms being high-centred. Mr. Parker (2 pls.; 1-4 yrs.; 42 in.) likes the colour however blooms are too thin and do not last — tall growth — no disease.

LOVE SONG, H.T. (G. Fisher '55). Pink blend. It is quite a satisfactory rose advises Dr. Lea (4 pls.; 2 yrs.; 48 in.) moderately vigorous and disease resistant — bloom production excellent, the blooms being beautiful in bud and open form. Nice rose, comments Mr. Cross (1 pl.; 3 yrs.) not enough bloom. Mr. Parker (2 pls.; 3 yrs.; 36 in.) reports: fair plant, disease resistant — not a prolific bloomer — blooms large but loose. *(Last year for reporting this rose.)*

LUNELLE, H.T. (Meilland '55). Pale pink. Performed well in its second year for Mr. Parker (3 pls.; 2 yrs.; 36 in.) foliage good and disease resistant — buds are long pointed and fairly full — bloom satisfactory and has excellent fragrance. *(Last year for reporting this rose.)*

LYS ASSIA, Fl. (Kordes '58). Orange-scarlet. Mr. Martindale (1 pl.; 1 yr.; 24 in.) reports blooms of good form on a well foliaged plant — some mildew.

Mr. Miles (1 pl.; 1 yr.; 40 in.) describes it as a pleasing rose worth growing — tall upright growth — good quantity of bloom — flowers are H.T. type — slight mildew.

MALIBU, Fl. (Morey '59). Coral orange-red. If you want a good hybrid tea, buy this floribunda, exclaims Mr. Miles (2 pls.; 1 yr.; 37 in.) a strong grower — large H.T. blooms mostly on single stems — reasonably good bloomer — no disease. It still hasn't proved itself to Mr. Clark (1 pl.; 2 yrs.; 12 in.) low grower — blackspots — blooms lack substance — colour deeper than Hawaii and more coral.

MARCIA GANDY, H.T. (Verchuren '57). The colour of this rose is hard to describe as there are four shades of red, states Mr. Buchanan (6 pls.; 1-2 yrs.; 24 in.) good grower with clean foliage — good sized five inch flower — strong fragrance.

MAYFLOWER, H.T. (C. Gregory & Son Ltd. '59). Light cerise reverse silvery pink. Due to dry summer there was not too much growth, therefore, Mr. Buchanan (1 pl.; 1 yr.; 24 in.) withholds his comments until next year.

MERRY WIDOW, Gr. (Lammerts '58). Dark red velvety crimson. Still a very good grandiflora comments Mr. Clark (1 pl.; 3 yrs.; 42 in.) vigorous disease free plant — good form in bud, open bloom being attractive — excellent colour. Dr. Lea (4 pls.; 1 yr.; 54 in.) is most enthusiastic about this rose, considers it the best new rose in his garden this year — symmetrical, hardy, no disease — very free flowering with perfectly formed long-lasting blooms. Dr. Moyle does not expect to keep this variety much longer.

METEOR, Fl. (Kordes '57). Orange-scarlet. Mrs. Baillie (1 pl.; 2 yrs.) reports a nice bushy plant that blooms freely, flowers do not fade. First year performance for Mr. Culver (2 pls.; 1 yr.; 15 in.) was satisfactory — bushy plant, healthy foliage and disease free — blooms being very attractive.

MESSAGE, *see* WHITE KNIGHT

MEXICALI ROSE, Fl. (Whisler '57). Yellow, suffused red. Mr. Haslett (1 pl.; 2 yrs.; 35 in.) reports spindly growth, has too few blooms, colour more vivid than 'Masquerade'. For Mr. Martindale (1 pl.; 1 yr.; 30 in.) it was an upright grower with good foliage, zinnia type bloom. Mr. Miles (1 pl.; 1 yr.; 42 in.) describes the bloom as similar to a small cactus dahlia, its form making it a good conversation piece — no disease. Mr. Parker (2 pls.; 2 yrs.; 30 in.) agrees that the flower sometimes looks like a dahlia, good bush, wood a little thin — bloom production satisfactory — no disease.

MIDNIGHT, H.T. (Swim '56). Dark maroon-red. Mr. Clark (1 pl.; 5 yrs.; 18 in.) moved his plant to a new location where it performed well — no blackspot this year, just a touch of mildew — still not a free bloomer. Mr. Grant (1 pl.; 5 yrs.; 36 in.) comments: stingy with blooms which are a good colour and fragrant — too much mildew, will discard. Earliest H.T. to bloom in Mr. Kallen's garden (1 pl.; 5 yrs.; 36 in.) its clean plant, dark red colour and spicy fragrance of the bloom earns its keep in his yard — not an exhibition rose. Mr. Selwood (1 pl.; 3 yrs.; 40 in.) reports a nice plant but not good enough to overcome sparse blooming and burning.

MISS FRANCE, Fl. (Gaujard '56). Coppery-red. Mr. Kallen (1 pl.; 2 yrs.; 24 in.) reports: nice colour to blooms, good foliage and over all a good plant. MONA RUTH, Min. (Moore '59). Nice rose-pink, is how Mr. Selwood (1 pl.; 1 yr.; 10 in.) describes the colour, flower on the large size — sprawls a little.

MONTEZUMA, Gr. (Swim '55). Salmon-red. The subdued rose-red colour of the bloom pleases Mrs. Antoft (12 pls.; 1-2 and 3 yrs.; 40 in.) the perfect blooms are large and long lasting — does not perform as well in a hot dry

season as when it is cooler and damp. Mr. Billington (4 pls.; 3-4 yrs.; 36 in.) is in agreement with Mrs. Antoft. For Mr. Borland (4 pls.; 1-3 yrs.) it was a tall grower and free blooming with attractive buds on long stems. One of its most endearing features is its long lasting blooms, states Mr. Clark (1 pl.; 6 yrs.; 29 in.) a disease free plant with good bloom production. Continues to give excellent all-round performance for Mr. Cross (1 pl.; 2 yrs.) My favourite in the whole garden is the enthusiastic acclaim of Mr. Grant (2 pls.; 3 yrs.; 60 in.) prolific bloomer — clean fine foliage — one of the top stars at the Vancouver show (1961). Mr. Kallen (1 pl.; 4 yrs.; 48 in.) reports 60% of his blooms are singles rather than the spray type, blooms tend to ball in wet weather. Dr. Lea (5 pls. 1-2 and 3 yrs.) also notes the tendency to ball in damp weather, being the only fault of this rose — growth vigorous and upright — free flowering — no disease. A good thrifty rose, states Mr. Lawton (2 pls.; 3-4 yrs.; 36 in.) that has performed well every year. Mr. Parker (4 pls.; 3-5 yrs.; 60 in.) admires the growth habit (very strong upright canes) — free bloomer with large pointed flowers of H.T. form, very poor in wet weather — disease resistant. After three years it winter killed in Mr. Westbrook's garden. No regrets. *(Last year for reporting this rose.)*

MOONSPRITE, Fl. (Swim '56). Creamy white. This rose has been a consistent show winner for Mr. Clark (1 pl.; 5 yrs. 16 in.) a disease free plant, delicate colouring and imbricated form makes an attractive flower. Would like more repeat bloom. Mr. Cross (1 pl.; 1 yr.) reports fair growth, notes colour of bloom has a tendency to fade. Mrs. Heideman (1 pl.; 1 yr.; 18 in.) advises flowers have a greenish cast and fluted shape, very pretty, but not free blooming. The writer's (1 pl.; 1 yr.; 20 in.) plant made sturdy bushy growth — always in bloom — no disease.

MORNING DAWN, L.C. (Boerner '55). Silvery rose. Nice bloom production this spring, advises Mr. Clark (1 pl.; 5 yrs.; 24 in.) beautiful, double, high centred, H.T. type blooms. Does not grow as a climber should. *(Last year for reporting this rose.)*

MUNSTER, S. (Kordes. Int. McGredy '58). Pink overlaid red. This looks like it will be an outstanding variety, reports Mr. Miles (1 pl.; 1 yr.; 60 in.) blooms almost continuously — needs room — disease resistant.

MY CHOICE, H.T. (Le Grice '58). Pale carmine, light yellow reverse. A wonderful cutting rose is the comment of Mr. Buchanan (3 pls.; 2 yrs.; 24 in.) flower on the smallish side, but fragrance makes up for size. This rose has a bright future in the opinion of Mr. Culver (1 pl.; 2 yrs.) his choice for exhibition, has full petalled bloom with high centre — vigorous grower and disease free. Planted by Mrs. Ferguson (1 pl.; 1 yr.) and frost conditions prevailed, making it difficult to give fair judgment. Mr. Lawton (1 pl.; 2yrs.; 22 in.) reports a healthy plant with nice foliage and no disease — bud is excellent while the bloom is pleasing and colourful. Mr. Miles' (1 pl.; 1 yr.; 36 in.) plant made strong upright growth — very large double blooms, excellent quality and very fragrant — glossy medium green foliage and disease resistant. One of the best roses in cultivation is the enthusiastic comment of Mr. Parker (4 pls.; 1 yr.; 30 in.) prolific bloomer in its first year with full blooms of good form and long lasting when cut, fragrance similar to 'The Doctor' — good foliage.

NOBILITY, H.T. (Boerner '61). Pink. Mr. Martindale (1 pl.; 1 yr.; 30 in.) received a poor plant which was slow to become established — upright growth with dull green foliage. Mr. Miles (2 pls.; 1 yr.; 40 in.) considers this as one of the most pleasing pinks he has seen — good bloomer, flowers having good form — glossy dark green foliage — no disease.

OLALA, Fl. (Tantau '56). Scarlet crimson paling to the centre. Mr. Buchanan (3 pls.; 3 yrs.; 36 in.) will unreservedly recommend this variety, has been a 'knockout' — very thick canes with flower heads about two feet across. The

writer (2 pls.; 2 yrs.; 30 in.) considers this an excellent rose — strong sturdy growth — blooms are outstanding, semi-double and free flowering in large clusters — disease resistant.

ORANGEADE, Fl. (McGredy '59). A bright unfading vermilion is how Mrs. Baillie (1 pl.; 1 yr.) describes the colour of this rose — vigorous bush with long lasting blooms on stiff stems. Blooms almost continuously, but only a few blooms at a time — very showy single type, would like more blooms. Mr. Cadsby's (1 pl.; 1 yr.) plant made fair growth — had lots of fall bloom — recommends it. A vigorous grower with good branching habits reports Mr. Culver (2 pls.; 2 yrs.) good bloomer, the colour being bright orange — has one fault, the colour fades after a hot day in the sun. Mr. Selwood (1 pl.; 1 yr.; 36 in.) considers it a sparse bloomer, blooms having excellent colour — good foliage. This variety gave the writer (3 pls.; 1 yr.; 24 in.) an outstanding performance in its first year — sturdy growth with plenty of good foliage — blooms come singly or in small clusters and are long lasting — no disease.

ORIENTAL CHARM, H.T. (Duerhsen '60). Turkey red. One of the better roses that shows great promise, states Mr. Rogalski (1 pl.; 1 yr.) dark green leathery like foliage and disease resistant — plenty of bloom which are single (5 to 12 petals) — huge buds and blooms up to six inches across.

PACIFIC, Fl. (Gaujard '59). Deep red. There was not much growth in its first year, reports Mr. Buchanan (5 pls.; 1 yr.; 20 in.) blooms are single the colour being most striking, will reserve judgment till next year.

PAPILLON ROSE, Fl. (Lens '56). Rich pink tinted salmon. In the dry heat of the past summer the newer plants did nothing, comments Mr. Buchanan (9 pls.; 1-3 yrs.; 30 in.) fair number of blooms on the older plants. Mr. Parker (1 pl.; 1 yr.; 18 in.) received a poor plant therefore will report further next year. The writer's (1pl.; 1 yr.; 30 in.) plant made good growth in a shaded position — blooms are H.T. type and worthwhile, however, it is a shy bloomer.

PAPRIKA, Fl. (Tantau '57). Light brilliant red is how Mr. Buchanan (3 pls.; 3 yrs.; 36 in.) describes the colour of this rose. The dry heat stopped the quantity of bloom obtained last year, did however intensify the colour.

PARIS MATCH, H.T. (Meilland '57). Warm deep pink. Mr. Culver (1 pl.; 1 yr.) was not pleased with the performance of this rose in its first year — growth poor — only a few inferior flowers. Mr. Kallen (1 pl.; 2 yrs.; 24 in.) tersely comments, nice blooms but not enough of them.

PEACEPORT, H.T. (Rokos, Int. Wyant '60). Deep orange-pink. Mr. Mitchell (1 pl.; 1 yr.; 20 in.) advises: this sport of Peace from the neck down is identical to the parent, but above is entirely different — medium size ovoid bud — size or shape not to be compared to Peace. Mr. Rogalski (1 pl.; 2 yrs.; 30 in.) reports: good clean foliage, bloom has no form.

PEACH GLOW, Fl. (Boerner '60). Mr. Miles' (1 pl.; 1 yr.; 40 in.) description is peach fuzz colour, soft and gentle, quite unlike any other rose — excellent bloomer — dull dark green foliage — no disease.

PEGGY GRANT, Min. (Moore '54, available in Canada '61). A genuine miniature comments Mr. Wilson (2 pls.; 1 yr.; 60 in.) the semi-double pale pink blossoms are lovely — bush covered with bloom — foliage fine and growth bushy.

PERLE von REMAGEN, H.T. (Burkhard, Int. Kordis & Tantau '57). Pink shading to creamy white. This bush really proved itself this year, enthuses Mrs. Ferguson (1 pl.; 3 yrs.) strong growth, blooms were beautiful, disease resistant.

PIANOFORTE, Pol. (Swim '59). White pink edging. Everybody loves this rose, states Mr. Parker (3 pls.; 1-2 yrs.; 14 in.) very free blooming, an exceedingly pretty single bloom — dwarf in habit — disease resistant.

PICCADILLY, H.T. (McGredy '60). Red and yellow bi-colour. This rose surprised me, comments Mrs. Baillie (1 pl.; 1 yr.) good foliage and an excellent bloomer, blooms a delicate pleasing blend, are very attractive — did not put out much height this year. A good bi-colour, more vigorous than Tzigane, reports Mr. Culver (1 pl.; 1 yr.) dark green foliage — flowers on the bush all summer — blooms very attractive. Frost conditions limited growth in Mrs. Ferguson's garden (1 pl.; 1 yr.) very green foliage, disease resistant — a very beautiful yellow rose tinged with red. It was a real disappointment to Mr. Lawton (1 pl.; 1 yr.; 8 in.). Looks like the flashiest of the bi-colours, advises Mr. Mitchell (1 pl.; 1 yr.; 20 in.) shiny foliage — blooms have good form — planted a bed of (50) at Windsor Utilities Garden October 30, 1961. In the opinion of Mr. Westbrook (1 pl.; 1 yr.; 40 in.) a fine bi-colour — tall healthy well foliaged growth — blooms of fine form and very freely produced. Is ordering more. The writer (3 pls.; 1 yr.; 24 in.) is very satisfied with the first year's performance — good growth, excellent foliage, while not a heavy bloomer, there is always flowers on the plants.

PINK CAMEO, Cl. Min. (Moore '54). Mr. Clark (1 pl.; 3 yrs.; 15 in.) reports his plant made good growth, really had laterals — blooms have good form and are a lovely colour. Very healthy bushy climber states Mrs. Murdoch (1 pl.; 1 yr.; 5 ft.) blooms all summer with lovely formed little buds. Number one miniature in the garden of Mr. Rogalski (1 pl.; 5 yrs.; 30 in.) blooms are rose pink with perfect form, bush covered with bloom most of the time. *(Last year for reporting this rose.)*

PINK CHIFFON, Fl. (Boerner '56). Seems to be declining each year advises Mr. Clark (1 pl.; 3 yrs.; 15 in.) not vigorous and too few blooms, disease resistant. Dr. Lea (2 pls.; 1-2 yrs.) reports plant is small and sprawling — scant bloom production, however flowers are most attractive.

PINK DUCHESS, H.T. (Boerner '59). Mr. Clark (1 pl.; 2 yrs.; 7 in.) advises 'The Duchess has not found our garden regal enough for her taste and she fails to grow or bloom'. Mr. Miles (1 pl.; 1 yr.; 48 in.) found this variety to be a strong grower — very large double blooms that are non-fading and long lasting — glossy dark green foliage — no disease. Mrs. Morrison (1 pl.; 1 yr.; 27 in.) comments blooms good but not too plentiful, foliage healthy.

PINK FAVOURITE, H.T. (Von Abrams '56). Dark pink. A superior variety, in the opinion of Dr. Burkhart (6 pls.; 4 yrs.) excellent quality of bloom. Mr. Cadsby's plant (1 pl.; 1 yr.) made strong growth — profuse bloom, flowers being attractive. Mr. Clark (1 pl.; 5 yrs.; 24 in.) reports: a vigorous plant with glossy foliage, best of all the roses he grows — free blooming, blooms having fine form and rich colour. Mr. Cross (3 pls.; 2 yrs.) considers it amongst his best — good growth, bloom and foliage. A good pink rose of exhibition quality, states Mr. Culver (1 pl.; 1 yr.) vigorous growth and proved to be very disease resistant. For Mr. Davis (2 pls.; 3 yrs.; 30 in.) it was vigorous and disease resistant — beautiful foliage and prolific bloom. Mr. Grant (1 pl.; 3 yrs.; 42 in.) agrees with Mr. Clark as to the excellent foliage — excellent variety, only fault 'blooms tend to blow too quickly in hot weather'. Mr. Kallen (3 pls.; 4 yrs.; 36 in.) regards it as an outstanding rose, worth growing for the excellent shiny foliage alone — excellent show possibilities if caught in the right stage. Mrs. Murdoch (1 pl.; 4 yrs.) reports this rose has outstanding glossy foliage — lovely high centred bloom which, if cut in tight bud, stands up well on the show bench — a must for every grower. Mr. Parker (3 pls.; 3 yrs.; 40 in.) comments: magnificent bush and foliage — very profuse bloom of excellent form — no disease. Mr. Rogalski (1 pl.; 3 yrs.; 30 in.) likes the perfect shiny foliage —

blooms have good form that does not last. Mr. Westbrook (1 pl.; 2 yrs.; 50 in.) considers this a good one — foliage is healthy and plant is winter hardy — never out of bloom.

PINK LUSTRE, H.T. (Verschuren, Int. J. & P. '57). Dr. Burkhart (3 pls.; 1 yr.) is not satisfied with first year performance, can only give it fair marks. Mr. Cadsby (1 pl.; 1 yr.) considers this variety has what it takes — one of the best new introductions — good foliage — strong growth — large erect blooms. For exhibition it can't be beat, states Mr. Clark (4 pls.; 1-5 yrs.; 18 in.) leaves much to be desired as a garden variety — little repeat bloom — sparse foliage, not an attractive bush — not vigorous. In the opinion of Mr. Culver (1 pl.; 2 yrs.) this is a fine exhibition rose, a large bloom of lovely recurving petals — blooms well but those big flowers come intermitently — strong growth — disease free. Dr. Lea's plants (5 pls.; 1-2 and 3 yrs.) give excellent all round performance, only fault a tendency to ball in damp fall weather — very vigorous upright grower — free flowering. Mrs. Meiklejohn (1 pl.; 3 yrs.; 36 in.) reports average growth with disease resistant foliage — fair number of blooms of excellent quality, exhibition type. Mr. Miles (1 pl.; 1 yr.; 43 in.) advises tall upright growth — bud has good form, bloom slightly loose when full open — tendency to purple spotting. Medium pink of good form states Mr. Rogalski (1 pl.; 3 yrs.; 24 in.) is lacking in bloom production and growth — foliage good.

PINK PARFAIT, Cr. (Swim '60). Mrs. Baillie (1 pl.; 1 yr.) believes this will be a very useful garden rose — growth and foliage good, some mildew — profuse bloomer. Mr. Clark (1 pl.; 1 yr.; 28 in.) is not entirely happy with the performance of this rose, beautiful blooms that lasted, came late in fall, in summer blooms blew rapidly. Looks very promising, states Mr. Cross (1 pl.; 1 yr.) an attractive pink that bloomed quite late. In Mr. Goulding's garden (1 pl.; 1 yr.; 36 in.) it made vigorous growth with good foliage, disease resistant — long lasting continuous bloom. As there was not much growth in its first year, Mr. Jubien (1 pl.; 1 yr.; 30 in.) is withholding comment. Mr. Miles (1 pl.; 2 yrs.; 52 in.) reports a vigorous thick heavy bush, very winter hardy — both quality and quantity of bloom excellent — blooms when first opening are excellent, less so when full open. Mrs. Morrison (1 pl.; 1 yr.; 30 in.) comments, good healthy foliage — bloom not outstanding — needs another year to prove itself. Dr. Moyle does not expect to keep this variety. Mr. Parker (3 pls.; 3 yrs.; 40 in.) advises the buds and blooms are lovely, however, do not last (quickly over) — long wait between bursts of bloom. Mr. Selwood (1 pl.; 1 yr.; 36 in.) found it to be a free bloomer with pretty flowers — 'nothing to get excited about'.

PINK PEACE, H.T. (Meilland. Int. C.-P. '59). Performed well for Mrs. Antoft (10 pls.; 1-2 yrs.; 50 in.) a very strong tall grower — always in bloom — the flowers are rose coloured, very large and heavy textured, attracts much admiration, is fragrant — disease free dark green foliage. Mr. Billington (2 pls.; 2 yrs.; 30 in.) had disappointing results — blooms like old soldiers, just faded away. Mr. Borland's (1 pl.; 1 yr.) plant had fine growth for the first year — large well formed bloom — free from mildew and blackspot. Mr. Clark (1 pl.; 2 yrs.) moved it in the spring, failed to survive last frosts — no regrets. Mr. Cross (1 pl.; 3 yrs.) performance fair, colour not striking. For Mr. Jubien (1 pl.; 3 yrs.; 60 in.) it is a terrific rose and a prize winner — tall bushy growth, hardy at Montreal — the quality of the bloom was excellent. Dr. Lea (3 pls.; 1-2 yrs.) reports tall and hardy growth, foliage dark and glossy, disease resistant — blooms open and fall too rapidly but are fragrant. Very seldom out of bloom, advises Mr. Miles (1 pl.; 3 yrs.; 52 in.) large slightly loose blooms that are very fragrant — tall vigorous grower very winter hardy. Nothing to recommend it states Dr. Moyle (1 pl.; 2 yrs.; 48 in.). Mr. Selwood (1 pl.; 3 yrs.; 48 in.) regards it as an average useful rose — form fair but not the best. Mr. Parker (1 pl.; 3 yrs.; 40 in.) describes it as a strong bush with good foliage and no disease — shy bloomer — blooms have good form.

POLKA DOT, Min. (Moore '56). Mr. Wilson (2 pls.; 1-3 yrs.; 8 in.) regards it as a very desirable variety — growth compact, foliage heavy — buds of H.T. form, exquisite at half open stage — blossom ivory-yellow to white, large (2 in.) very double pompom effect.

PREMIER BAL, H.T. (Meilland '55). Ivory edged cyclamen-rose. Mr. Cadsby (1 pl.; 1 yr.) regards it as an interesting novelty — exquisite in June, but ragged rest of year — blooms are a little flat. For Mr. Kallen (1 pl.; 2 yrs.; 20 in.) it is a nice clean plant with blooms and foliage that are eye appealing — very different. Dr. Lea (2 pls.; 1-2 yrs.) reports a very small and sprawling plant with very few blooms, but these few were exceptionally lovely. *(Last year for reporting this rose.)*

PRASIDENT DR SCHRODER, H.T. (Kordes '59). A very beautiful red advises Mrs. Ferguson (1 pl.; 1 yr.) growth limited due to frost conditions — fall blooms were absolutely beautiful — disease resistant.

PRESTIGE, S. (Kordes '57). Deep red. A favourite of Mr. Anderson (5 pls.; 1-3 yrs.; 50 in.). An excellent bush that is healthy and blooms steadily — five more planted in fall of 1961. Mr. Cross (1 pl.; 1 yr.) advises it promises well, vigorous with lots of bloom.

PRIMA BALLERINA, H.T. (Tantau '58). Cherry-pink. This has turned out to be an exceptional bush, advises Mrs. Ferguson (1 pl.; 1 yr.) very vigorous — disease resistant — blooms a beautiful pink. Mr. Mitchell (1 pl.; 4 yrs.; 38 in.) reports a good plant with upright growth — large foliage — most fragrant — this beautiful pink has been overlooked. A lovely rose of two tones, states Mr. Parker (3 pls.; 1 yr.; 30 in.) blooms have good form and are very fragrant — no disease. The writer (1 pl.; 1 yr.; 36 in.) is in accord with the other contributors as to this being an excellent variety — only fault, not exactly a free bloomer — have ordered more stock.

PUREGOLD, H.T. (Robichon, Int. Ilgenfritz '60). Mr. Kallen (2 pls.; 2 yrs.; 18 in.) regards this as a fine yellow H.T. that is at its best in the bud stage — opens too quick for the exhibitor — excellent foliage.

QUEEN OF BERMUDA, Fl. (Bermuda Nurseries '56). Geranium red, tinged orange. Dr. Lea (1 pl.; 3 yrs.) advises that after three years of disappointing performance, it will be discarded.

RED DANDY, Fl. (Norman '59). Bright scarlet. Mr. Miles (1 pl.; 2 yrs.; 42 in.) reports a tall upright bush that could be more vigorous — died back severely last winter — large four inch blooms having good form — only a fair bloomer.

RED EMPRESS, Cl. (Mallerin '56). Very showy this spring, reports Mr. Clark (1 pl.; 5 yrs.; 48 in.) flowers of perfect form are long lasting and produced abundantly — does not have much repeat bloom.

RED WINGS, Fl. (Boerner '58). Dark red. Rather disappointing this year as flowers were not produced freely advises Mr. Clark (1 pl.; 3 yrs.; 18 in.), disease resistant. Mr. Miles (1 pl.; 2 yrs.; 26 in.) reports rather a weak grower, low and straggly — quality and quantity of bloom fair — winter hardy — no disease.

RIMOSA, Fla. (Meilland '59). Very pretty clear yellow, advises Mrs. Heideman (3 pls.; 2 yrs.; 24 in.) very free blooming — showy as a bedding rose.

ROBIN, Min. (Dot '56). Mr. Clark (2 pls.; 5 yrs.; 8 in.) moved his plants — result they grew and flourished and bloom production increased — flowers an attractive soft red — its best year. Mr. Rogalski (3 pls.; 3 yrs.; 10 in.) comments, a cute light red miniature, not too vigorous. A highly desirable miniature in the opinion of Mr. Wilson (1 pl.; 1 yr.; 10 in.) upright growth — bloom bright red fading to soft red are long lasting and usually in clusters, petals tightly quilled.

ROSE GAUJARD, H.T. (Gaujard '58). Bright vermilion with silvery white reverse. Marked excellent in all departments by Dr. Burkhart (3 pls.; 1 yr.) attracted much attention in Portland, Oregon. Mr. Cadsby (1 pl.; 1 yr.) reports good growth, upright habit, sometimes very attractive blooms. Needs lots of room to grow, advises Mr. Culver (1 pl.; 2 yrs.; 48 in.) and Mr. Parker (3 pls.; 1-2 yrs.; 72 in.) both state it is a constant bloomer and mention split centres — foliage dark green and healthy. Mr. Culver believes it has exhibition possibilities. Did exceptionally well this year for Mr. Jubien (1 pl.; 2 yrs.; 48 in.) a blue ribbon winner — growth rather tall with strong stems — bloom of excellent quality — good bloomer. Mr. Mitchell (2 pls.; 3 yrs.; 36 in.) comments: good plant — good foliage — has shown some improvement after many split centres, colour combination dull. Dr. Moyle (1 pl.; 2 yrs.; 36 in.) has an increased fondness for this rose — vigorous growth and hardy — excellent long lasting blooms. Mr. Selwood (1 pl.; 1 yr.; 44 in.) reports a very vigorous plant — prolific bloomer — blooms are colourful and well formed — good foliage. Has performed well in the writer's garden (2 pls.; 1-2 yrs.; 36 in.).

ROYAL GOLD, Cl. (Morey '57). Golden yellow. Mr. Mitchell (3 pls.; 1 yr.; 6 ft.) advises foliage looks tender for low temperatures — blooms have good form and colour — shy bloomer first year.

ROYAL VELVET, H.T. (Meilland '59). Velvety cardinal red. Mr. Kallen (1 pl.; 2 yrs.; 36 in.) describes it as a rose of many petals — however has not enough bloom — growth good — foliage fair. A real disappointment to the writer (1 pl.; 2 yrs.; 20 in.) this year, may not like our winters.

RUBY LIPS, Fl. (Swim '58). Medium dark red. Not a good year for this variety, states Mr. Clark (1 pl.; 3 yrs.; 23 in.) did not have the usual riot of colour — bloom production down — low growing bush, disease resistant.

RUDOLF SCHMIDTS JUBILAUMROSE, Fl. (Kordes '55). Mrs. Ferguson (40 pls.; 2 yrs.) is of the opinion that this is a very good floribunda — hardy, good growth — had blackspot this year. *(Last year for reporting this rose.)*

RUMBA, Fl. (Poulsen, Int. McGredy '60). Colour is a combination of old gold and red, advises Mr. Buchanan (2 pls.; 1 yr.; 20 in.) a compact low growing plant — in the dry season there was few flowers — blooms very good. Mr. Lawton (1 pl.; 1 yr.; 12 in.) reports a small low growing plant, quite healthy — bloomed above average in its first year — blooms are small but bright — would make a good edging rose if the colour appealed. The writer's plants (2 pls.; 1 yr.; 18 in.) made good sturdy growth — always in bloom, blooms are the button type — abundant foliage, disease resistant.

SALUTE, Fl. (McGredy '58). Cherry and ochre bi-colour. Mr. Buchanan (2 pls.; 1 yr.; 24 in.) did not find this variety exciting — not much growth in a dry summer. Mr. Lawton (1 pl.; 2 yrs.; 10 in.) had to prune rather hard to get rid of winter-killed wood, bloom after this was very slow — very few blooms, however, colour and shape good.

SARABANDE, Fl. (Meilland '57). Dazzling orange-red. Mr. Rogalski (26 pls.; 2 yrs.; 24 in.) considers it to be the best floribunda for a low growing hedge — always in bloom — spreading habit — good foliage. In Mr. Selwood's garden (1 pl.; 2 yrs.; 30 in.) it is a free bloomer — vivid colour of blooms rivet attention. Mr. Parker (3 pls.; 2 yrs.; 24 in.) agrees it is a profuse bloomer — low thick bush, disease free. Dr. Moyle (1 pl.; 5 yrs.; 30 in.) advises vigorous growth — attractive single blooms of a pleasing colour — is fond of this rose. Mr. Miles (1 pl.; 2 yrs.; 30 in.) concurs that this rose is ideal for a low hedge — three inch blooms of good quality — rich dark glossy foliage — no disease. Mrs. Meiklejohn (1 pl.; 1 yr.; 20 in.) reports poor growth, a sprawling plant with poor foliage. Mrs. Heideman (1 pl.; 1 yr.; 24 in.) found the attractive colour of the bloom faded too quickly. Mr. Haslett

(1 pl.; 2 yrs.; 20 in.) comments: low spreading growth and quite free flowering — brilliant colour that lasts well. Failed to meet the expectations of Mr. Clark (1 pl.; 2 yrs.; 20 in.) this year — bloom production down — not sufficient growth to avoid that sprawling habit — disease free. Mr. Anderson (1 pl.; 1 yr.) likes the very striking bright colour, will plant more.

SARAH ARNOT, H.T. (Croll '56). Warm rose-pink. Mr. Parker (1 pl.; 1 yr.; 30 in.) advises plant carried a large number of blooms for a short time, none since — will reserve comments until next year.

SHEPHERDS DELIGHT, Fl. (Dickson '57). Flame and yellow. Mr. Buchanan (4 pls.; 1-3 yrs.; 40 in.) reports not as much growth in the dry season as in previous years, some good clusters, colour good but fleeting. Mr. Cross (1 pl.; 3 yrs.) advises strong growth — fair bloom production — unusual colour. Another good floribunda in the opinion of Mr. Jubien (3 pls.; 2 yrs.; 42 in.) always has flowers on the bushy plant — hardy and disease resistant. Mr. Miles (1 pl.; 1 yr.; 34 in.) likes this variety — plant received very late in spring still made good growth — good quality and quantity of bloom — a lively colour. Mr. Parker (3 pls.; 1-2 yrs.; 40 in.) states it is a tall bush with few canes — sparse bloom in hot weather — a bright attractive colour — some blackspot and mildew. Mr. Westbrook's plant (1 pl.; 3 yrs.; 20 in.) was so hard hit by winter it never bloomed — 'a pity as it can be so good'.

SILVER LINING, H.T. (Dickson '59). Rose, silvery pink reverse. Mrs. Baillie (1 pl.; 2 yrs.) regards it as a satisfactory variety — a great bloomer — has good foliage and growth. Mr. Billington's plant (1 pl.; 1 yr.; 24 in.) made somewhat slow growth — good glossy foliage on good stems, not enough bloom. Mr. Culver (1 pl.; 2 yrs.; 40 in.) is fond of this rose — grows well and blooms have good form — had blackspot. Mr. Goulding (2 pls.; 3 yrs.; 24 in.) reports: poor growth — canes spindly — well shaped long bloom — sparse bloomer — subject to mildew. A good deep pink blend, states Mr. Jubien (1 pl.; 2 yrs.; 36 in.) rather tall grower — hardy — not a free bloomer — good foliage, disease resistant. For Mr. Lawton (1 pl.; 1 yr.) it was a healthy plant — fairly good growth — not many blooms, however they are a lovely colour. Could be exhibition in the opinion of Mr. Mitchell (2 pls.; 1-2 yrs.; 32 in.) upright growth — shiny light green foliage — blooms have good form and are fragrant. For Mr. Parker (3 pls.; 1-2 yrs.; 36 in.) one of the best — quite free blooming — blooms have good form, many petals and are very fragrant — no disease.

SIMONE (Mauve Mallerin), H.T. (Millerin. Int. Hemeray-Aubert '57 — Int. C.-P. '61). Mr. Bernard (1 pl.; 1 yr.; 36 in.) advises the colour (mauve) stands up — continuous bloomer — huge blooms — disease resistant.

SIMPLE SIMON, Min. (de Vink '55. Int. Canada & U.S.A. '61). Mr. Wilson (1 pl.; 1 yr.; 8 in.) reports upright growth — blossoms bright pink are small borne in clusters and individually — a continuous delight.

SIR WINSTON CHURCHILL, H.T. (Dickson '55). A good bedding pink blend on a strong healthy bush, reports Mr. Westbrook (2 pls.; 4-5 yrs.; 38 in.) very winter hardy — produces very late in the fall. Mr. Parker (2 pls.; 3 yrs.; 36 in.) advises: 'no major faults but lacks personality'. In Mr. McNeill's garden (2 pls.; 2 yrs. 38 in.) it is a disease resistant plant with fine foliage — blooms of good colour and form. For Mr. Cadsby (1 pl.; 3 yrs.) it has been a real disappointment. *(Ltst year for reporting this rose.)*

SOROYA, H.T. (Meilland '55). Orange red. After a disappointing first year Mr. Kallen (1 pl.; 2 yrs.; 30 in.) reports very good performance this year with some blooms of good exhibition quality — foliage very good. Has never performed well for Dr. Lea (2 pls.; 2-4 yrs.) plants being small and unattractive — flowers are beautiful and most attractive. Mr. Parker (2 pls.; 3 yrs.;

36 in.) is not happy with this variety. The writer (1 pl.; 2 yrs.; 30 in.) found it to be a tallish spindly grower — good foliage — fair quantity of bloom — worth keeping for the beautiful flower. *(Last year for reporting this rose.)*

SPARTAN, Fl. (Boerner '55). Orange red to reddish coral. A favourite of Mrs. Antoft (14 pls.; 1-2 yrs.) blooms are freely produced over the entire season and the colour of the bloom is spectacular. Better year for Spartan, writes Mr. Clark (1 pl.; 6 yrs.; 31 in.) more growth and bloom — better form — quite disease resistant. Continues to be one of my best, states Mr. Cross (2 pls.; 3 yrs.) floriferous. Mr. Kallen (1 pl.; 4 yrs.; 30 in.) reports: produces enough basal breaks to fill out a plant nicely — good foliage. For Dr. Lea (2 pls.; 1-2 yrs.) it was low growing but very floriferous. Mr. Parker (3 pls.; 4 yrs.; 40 in.) advises: good foliage and lots of bloom — flowers are fragrant but do not stand up in the hot sun. A hard working good rose is how Mr. Selwood (1 pl.; 4 yrs.; 40 in.) describes it — blooms well formed for a floribunda. *(Last year for reporting this rose.)*

SPRINGSONG, Min. (Moore '57). Bright clear pink. Mr. Wilson (3 pls.; 1-2 yrs.; 6 in.) reports wide spreading growth — bloom medium size borne in sprays and individual and is fully double — an excellent miniature.

STARFIRE, Gr. (Lammerts '58). Cherry-red. Mr. Clark (1 pl.; 3 yrs.; 36 in.) reports: healthy bush, but not enough bloom — blooms last well and are attractive — not as outstanding this year. Mr. Cross (2 pls.; 3 yrs.) obtained only fair performance. Dr. Lea (4 pls.; 1-2 yrs.) considers this among the best of any class — tall — vigorous — shapely — disease resistant — beautiful blooms. Mr. Miles (1 pl.; 3 yrs.; 36 in.) advises it is slightly straggly in growth and bloom is too loose for his fancy — winter hardy. For Dr. Moyle (2 pls.; 3 yrs.; 30 in.) it had fair vigor and hardiness — bloom pleasing — give it another year. One of the best grandifloras in the opinion of Mr. Rogalski (3 pls.; 2 yrs.; 36 in.). In Mr. Selwood's garden (1 pl.; 3 yrs.; 48 in.) it was a persistent bloomer though not many at a time — open habit of growth.

STARLET, Fl. (Swim '57). Yellow. Mr. Clark (1 pl.; 4 yrs.; 16 in.) reports a dainty little plant with flowers of perfect form — would like more bloom — not vigorous but disease free. Mr. Lawton comments: good healthy plant — good foliage — blooms a nice bright yellow — have good form — not a heavy bloomer.

STELLA, H.T. (Tantau '59). The colour is a combination of yellow and pink, turning over-all pink as the bloom ages, writes Mr. Buchanan (1 pl.; 1 yr.; 20 in.) large bloom — needs another year before passing judgment. The big disappointment of the year, comments Mr. Mitchell (2 pls.; 1 yr.; 30 in.) had mildew, blackspot, split centres and poor colour.

STERLING SILVER, H.T. (Fisher '57). Lavender. Mr. Bernard's plant (1 pl.; 2 yrs.; 24 in.) had very few blooms — foliage disease resistant. Mr. Cadsby has discarded it. Mr. Clark (1 pl.; 2 yrs.; 10 in.) had two beautiful buds in the spring and then it rested on its laurels — at least it was disease free. Mr. Davis (1 pl.; 1 yr.; 20 in.) found the plant not too vigorous — attractive bloom. It was a better producer for Mr. Jubien (1 pl.; 2 yrs.; 36 in.) this year — no bloom, however, after first week in August — rather tall grower and hardy. It is slated for discard by Dr. Lea (1 pl.; 1 yr.) poor straggling bush — very scant bloom production. Dr. Moyle is also discarding. Mr. Mitchell (1 pl.; 1 yr.; 18 in.) tersely comments: attractive colour in the bud, but soon flies open. Mr. Parker (1 pl.; 1 yr.; 30 in.) reports not many blooms and few canes — blooms best he has seen in this colour — fragrant. Mr. Selwood (1 pl.; 3 yrs.; 30 in.) regards it as the best of the lavenders — some fragrance — only fairly free bloomer — plant not too strong.

ST. PAULI, Fl. (Kordes '58). Light red with creamy yellow reverse. Mr. Buchanan (7 pls.; 3 yrs.; 30 in.) is pleased with this variety — long stems with

big heads of bloom — free blooming. In the opinion of Mrs. Ferguson (8 pls.; 2 yrs.) still an outstanding floribunda — erect exceptional growth — free blooming — disease resistant — did bloom right up to the end of the season. For Dr. Lea (1 pl.; 2 yrs.) tall — vigorous — healthy — floriferous — flowers are long lasting — with the minor fault that blooms fade rather badly in the late open stage, it is one of the best recent introductions.

SUMATRA, Fl. (Mallerin '56). Oriental red. Dr. Lea (3 pls.; 1-3 yrs.) excellent rose — low growing, moderately vigorous — very floriferous — blooms are beautiful and long lasting, in all stages — very bright and attractive. Mr. Clark (1 pl.; 5 yrs.; 24 in.) a mass of oriental red each spring — would like it to repeat with more abundance — good foliage and disease free.

SUMMERTIME, H.T. (Boerner '57). Light soft pink. Mr. Clark (2 pls.; 3-5 yrs.; 20 in.) reports a small plant with small flowers — can have lovely bud form — a nice bloom on a bronze foliaged plant — may mildew some. Mr. Kallen (1 pl.; 2 yrs.; 30 in.) comments: a good rose, but not typical H.T. form — would like more blooms because they are nice. Mr. Parker (2 pls.; 4 yrs.; 30 in.) states there are too many blooms on stem — blooms are small of good form and fragrant — no disease.

SUPER STAR, H.T. (Tantau '60). Light vermilion. Should be wonderful when established, advises Mr. Buchanan (1 pl.; 1 yr.; 30 in.) terrific amount of bloom in one cluster — needs disbudding for exhibition bloom — colour a gorgeous bright vermilion — has ordered more stock. Mr. Jubien's plant (1 pl.; 1 yr.; 18 in.) had poor growth — fragrant blooms but not too many. Mr. Rogalski (2 pls.; 1 yr.; 54 in.) is enthusiastic about this rose — very vigorous growth with good foliage and is disease resistant (never sprayed) — blooms are an eye-catching colour with good form and quality — has to be disbudded constantly for good exhibition bloom — 'a truly Super rose'.

SUSPENSE, H.T. (Meilland '60). Deep red with a deep yellow reverse. A disappointment to Mr. Bernard (1 pl.; 1 yr.; 30 in.) as there was not too much bloom — had no disease. Vigorous grower for a first year plant, reports Mr. Buchanan (1 pl.; 1 yr.; 24 in.) form of the flower holds — slight fragrance — perhaps the best of the bi-colours in his garden. Dr. Moyle (1 pl.; 1 yr.; 36 in.) advises: resembles dahlia in form — vigorous hardy grower — expects it to stay with us.

SWEET REPOSE, Fl. (de Ruiter '56). Maize yellow, tinged carmine. Mr. Parker (2 pls.; 3 yrs.; 40 in.) reports a good bushy plant — few blooms this year, does not like a hot sun — nice colour — no disease.

TABARIN, Fl. (Gaujard '56). Salmon-pink flushed yellow and copper-orange to red. Mr. Buchanan (15 pls.; 1-3 yrs.; 30 in.) recommends this rose — always in bloom — colour combination a favourite of all visitors.

TAMBOURINE, Fl. (Dickson '59). Carmine-red and orange yellow bi-colour. Mr. Cross (2 pls.; 3 yrs.) regards this as a lovely bi-colour — vigorous growth — continuous bloomer. Dr. Moyle (1 pl.; 2 yrs.; 48 in.) found it to be very vigorous and hardy — blooms are attractive. Mr. Parker (1 pl.; 1 yr.; 36 in.) had poor bloom production in its first year. A real sturdy upright grower in the writer's garden (2 pls.; 1-3 yrs.; 36 in.) it needs room — always in bloom.

TANYA, H.T. (Maurice Combe, Int. J. & P. '59). Burnt orange. Mr. Haslett (1 pl.; 1 yr.; 20 in.) found his plant short on growth and blooms. Mr. Lawton (2 pls.; 1 yr.; 20 in.) states blooms have good form — one plant had three blooms, the other none. Mr. Martindale (1 pl.; 1 yr.; 20 in.) reports moderate growth with reddish foliage — blackspots easily — beautiful blooms well formed but few in number. Mrs. Meiklejohn (1 pl.; 2 yrs.; 24 in.) also advises moderate growth — large tangerine coloured blooms of unusual form — not many.

but beautiful — clean strong foliage. Mr. Miles (1 pl.; 1 yr.; 31 in.) regards it as a 'must' — excellent quality of bloom and a colour that attracts you as iron to a magnet — no disease. For Mr. Selwood (1 pl.; 1 yr.; 36 in.) a good plant with small flowers — stingy bloomer.

TAPESTRY, H.T. (Fisher, Int. C.-P. '58). Bright red, canary-yellow and rose-pink combined. Mrs. Ferguson (2 pls.; 1-2 yrs.) regards it as a satisfactory variety — outstanding bloom — good foliage — strong grower — disease resistant. Mr. Rogalski (1 pl.; 2 yrs.; 24 in.) comments: an unusual rose of no form — no two flowers have the same colour.

TEENAGER, H.T. (Arnot, Int. Croll '58). Mr. Lawton (1 pl.; 1 yr.; 24 in.) regards it as a lovely bi-colour, yellow shaded pink with a deep shading — a very nice bloom, fragrant — fair amount of bloom for a first year plant.

TEXAN, Fl. (Lindquist '56). Rose-red. A consistently reliable floribunda in the opinion of Mr. Clark (1 pl.; 5 yrs.; 33 in.) vigorous, disease free plant — good bloom production — long lasting flowers of excellent form. Mr. Davis (1 pl.; 2 yrs.; 24 in.) had a fair amount of bloom. Mr. Kallen (1 pl.; 4 yrs.; 48 in.) describes it as a great rose, excellent in every way, bloom, colour, foliage and plant in general. Dr. Lea (3 pls.; 1-3 yrs.) comments: very tall and striking in appearance — healthy and vigorous — dark green foliage.

THE DUKE, H.T. (von Abrams '56). Red with gold reverse. Mr. Rogalski (1 pl.; 3 yrs.; 30 in.) advises flowers have good form in bud and bloom — good dark green foliage — spreading habit.

TORCH SONG, H.T. (Meilland, C.-P. '59). Vermilion. Mr. Clark (1 pl.; 3 yrs.; 18 in.) reports: low growing plant, disease free — bloom colour similar to 'Aztec' without its petalage and substance. A good tall red rose, states Mr. Jubien (1 pl.; 2 yrs.; 48 in.) good foliage disease resistant — quite free blooming — bloom quality being very good. Mr. Lawton (1 pl.; 3 yrs.; 18 in.) is discarding, has had trial enough — slow low grower and a sparse bloomer.

TWILIGHT, H.T. (Boerner '55). Lavender-lilac. Has shown great improvement, advises Mr. Clark (1 pl.; 6 yrs.; 22 in.) has been lovely this fall and above average (for it) in the spring — can produce blooms of perfect form and clear colour. Mr. Parker (1 pl.; 5 yrs.; 18 in.) tersely reports, 'not worth growing'. *(Last year for reporting this rose.)*

TZIGANE, H.T. (Meilland, Int. Hennessey '56). Yellow with orange-scarlet on reverse. Always attracts attention and comments, states Mrs. Antoft (15 pls.; 1-2 and 3 yrs.; 40 in.) a tall healthy bush wih shiny dark foliage — never without blooms — fragrant. Continues to amaze Mr. Billington (1 pl.; 4 yrs.; 30 in.) with its hardiness — bloom sparse but of good form — is ordering more. For Mr. Cadsby (2 pls.; 1 yr.) it is one of the best bi-colours — bloom does not stand up when cut. Mr. Grant (1 pl.; 3 yrs.; 40 in.) writes, its one fault, blooms do not always open to a good shape. In the opinion of Mr. Kallen (1 pl.; 2 yrs.; 40 in.) a fine bi-colour, best he has seen, bloom is eye-catching from any distance — lots of plant, many blooms and good foliage. Mr. Lawton (1 pl.; 6 yrs.; 33 in.) reports: a very lovely rose — foliage healthy — blooms good in form and colour. Mr. Martindale (1 pl.; 4 yrs.; 36 in.) agrees that it is the best of the bi-colours — excellent habit with lovely foliage. Should be in every garden, advises Mr. McNeill (3 pls.; 2 yrs.; 30 in.) nice glossy foliage — nice colour — some blackspot. Mr. Parker (2 pls.; 4 yrs.; 30 in.) found it to be rather a sparse bloomer — blooms are fragrant and of good form — disease free.

VASSAR CENTENNIAL, H.T. (Meilland, Int. C.-P. '61). Peach pink. Mr. Rogalski (1 pl.; 1 yr.; 30 in.) states this variety blooms all at one time, bush was covered when in bloom — large bud that shows promise to be exhibition — dark green foliage that had some mildew.

VENDOME, Fla. (Gaujard '57). This is the best of the salmon pink floribundas — the flowers are large and borne all season in small clusters, is the report of Mr. Buchanan (7 pls.; 1-3 yrs.; 30 in.).

WENDY CUSSONS, H.T. (C. Gregory — Son '59). Cerise flushed scarlet. Mr. Buchanan (3 pls.; 1 yr.; 24 in.) reports: plant habit tall and bushy — flower a good size and a pleasing colour. Mr. Parker (4 pls.; 1 yr.; 30 in.) is very impressed with this variety — blooms of good form and size are very fragrant and long lasting — has many blooms on plant through the season. Should be a great favourite, in the opinion of Mr. Miles (1 pl.; 1 yr.; 31 in.) has a fragrant large double bloom and is seldom without bloom — no disease. Mr. Westbrook (2 pls.; 1 yr.; 36 in.) enthuses: if this one is winter hardy we have a prize winner — blooms continuously with exhibition type blooms each on a long individual stem — very fragrant — foliage plentiful and no sign of rust (bushes all round it were full of rust).

WESTMINSTER, H.T. (Robinson '60). Cherry red, paler on the reverse. Striped and splashed yellow. Mr. Buchanan (1 pl.; 1 yr.; 20 in.) reports: not too much growth in first year — strong fragrance — has ordered more stock. Mr. Selwood (1 pl.; 1 yr.; 36 in.) comments: good foliage — early bloom excellent, but poor in warm weather.

WHITE BOUQUET, Fl. (Boerner '56). A good variety for Mrs. Heideman (1 pl.; 1 yr.; 24 in.) vigorous and free blooming — very large and full individual blooms. Mr. Kallen (1pl.; 5 yrs.; 24 in.) rates it as the best floribunda he has seen — an early bloomer in the spring — good quantity of bloom. It was a 'flop' for Mr. Miles (1 pl.; 3 yrs.; 28 in.) quality and quantity of bloom being only fair — no disease. Mr. Parker (2 pls.; 3 yrs.; 18 in.) reports dwarf growth — free blooming but blooms too large for short stems — fragrant and disease resistant.

WHITE KNIGHT, H.T. (Meilland, U.R.S., C.-P. '57). Mrs. Antoft (7 pls.; 1-2 yrs.; 24 in.) reports: growth and blooms similar to 'Virgo' however prefers 'Virgo' — quite winter hardy and disease resistant. Mrs. Baillie (1 pl.; 1 yr.) comments: good white — thin blooms of good form — sparse bloomer. Mr. Billington (1 pl.; 4 yrs.; 36 in.) also prefers 'Virgo' — while plant is winter hardy it only produced limited blooms — blooms are of good quality but do not stand up. For Mr. Clark (1 pl.; 3 yrs.; 17 in.) not a vigorous plant, seems to decline during the season — exhibition type bloom. Has not proven itself to Mr. Davis who has tried several plants. A wonderful white rose, enthuses Mr. Grant (2 pls.; 3 yrs.; 40 in.) generous producer — blooms of excellent quality which open well for the show bench — needs no disbudding — neat upright plant, Mr. Lawton (1 pl.; 2 yrs.; 24 in.) advises — healthy foliage — bloom reasonably well — blooms are good shape and colour. Mr. Mitchell (2 pls.; 1 yr.; 22 in.) notes it has more petals than 'Virgo' — longer lasting. A good rose in the opinion of Mrs. Murdoch (1 pl.; 1 yr.) however it mildews early and badly. Mr. Parker (4 pls.; 5 yrs.; 60 in.) regards it as the best white H.T. — a tall plant giving many excellent blooms of excellent form — some mildew. There are better whites in the opinion of Mr. Westbrook (2 pls.; 3-4 yrs.; 36 in.) blooms can be fine of a real exhibition type — rather shy bloomer — foliage very susceptible to rust.

WHITE QUEEN, H.T. (Boerner '58). A very good intense white rose, is how Mr. Jubien (1 pl.; 1 yr.; 36 in.) describes this rose — not much bloom in the first year — blooms of excellent quality — medium height and bushy.

WILDFIRE, Fl. (Swim '55). Brilliant red. A thorny, compact plant with never a hint of disease, advises Mr. Clark (1 pl.; 6 yrs.; 18 in.) free blooming — very colourful. Mr. Parker (2 pls.; 3 yrs.; 36 in.) regards this as a good plant, gives lots of bloom. *(Last year for reporting this rose.)*

YELLOW BANTAM, Min. (Moore '60). The best yellow miniature, as Mr. Rogalski (1 pl.; 1 yr.; 5 in.) describes it — good form in bud, a nice colour that fades in open bloom — not a heavy bloomer — a true miniature. A wee plant that is sure to claim attention, advises Mr. Wilson (1 pl.; 1 yr.; 6 in.) compact bushy growth — a petite plant with fine foliage and slender stems — butter-yellow buds opening to feathery white blossoms.

YELLOWHAMMER, Fl. (McGredy '56). Bronzy-yellow. For Mr. Buchanan (9 pls.; 1-3 yrs.; 24 in.) this is a very good grower — plants are in bloom at all times in small clusters — colour non-fading. Mr. Parker (3 pls.; 6 yrs.; 12 in.) advises: 'I can't grow it'.

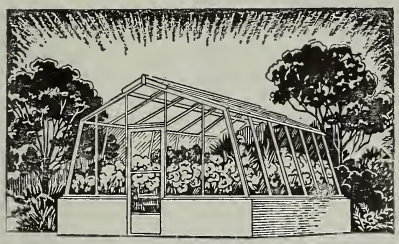
ZITRONENFALTER, S. (Tantau '56). Deep yellow. Mr. Buchanan (1 pl.; 3 yrs.; 6 ft.) advises: there was a lot of broken canes after last winter's heavy snow, plant however, made a good comeback, lots of new growth — plenty of bloom with flowers of a large size.

Index to Advertisers

	Page
Alpenglow Gardens	226
Anderson-Smythe Limited	228
Bank of Montreal	226
Birks, Henry, and Sons (Ontario) Ltd.	230
Bridgman Ltd., R. E.	240
Brookdale-Kingsway Limited	244
Cadsby, M. A.	246
Canada Packers Ltd.	238
Canadian Imperial Bank of Commerce	236
Canadian Oil Companies, Limited	227
Connon, John, Nurseries Ltd.	234
Cruickshank, C. A. Ltd.	230
Cyanamid of Canada Ltd.	241
Dickson, Alex., and Sons Ltd.	246
Dixon-Reid Co. Ltd.	244
Dunlop (Canada) Ltd.	234
Duplate (Canada) Limited	225
Eddie, H. M. and Sons, Ltd.	242
Ellesmere Nurseries Limited	228
Endean Nurseries Limited	234
Garden Club of Toronto	236
Garden Hose Spray Co. Inc.	224
Harkness, R. & Co. Ltd.	243
High Park Rose Specialists	229
Keith, George, and Sons Ltd.	226
Key Advertising Service Limited	238
Kraus, V., Nurseries	224
Lord and Burnham Co. Limited	223
McConnell Nursery Co. Ltd.	245
Modern Rose Nursery	232
Ortho Agricultural Chemicals Ltd.	233
Pallek, Carl, and Son Nurseries	238
Parker Pen Co. Ltd.	241
Perron, W. H. and Co. Ltd.	237
Pickering Nurseries Reg'd	240
Plant Products Co. Ltd.	235
Richardson's Extermination Ltd.	228
Rosecroft Nurseries Ltd.	241
Ross Root Feeder	242
Rowen Press Ltd.	236
Sheridan Nurseries Ltd.	247
So-Green Industries Ltd.	230
Swift Canadian Co. Limited	243
Teolis, A. Ltd.	232
Thorn Press	248
Upjohn Company	239
Welland Vale Manufacturing Co. Ltd.	237
Wilkinson Sword Ltd.	231
Wilson Laboratories Ltd.	232

ORLYT

WOOD or ALUMINIUM GREENHOUSES



Excellent for growing
your Hybrid Roses
or anything else you choose

Beautiful and bright for a lifetime of carefree gardening. A pride to own. Easy to operate with automatic heat and ventilation. Never needs paint — no putty glazing. Made of aluminium alloyed for greatest strength and resistance to corrosion — the perfect 'forever metal' for greenhouse construction. Send for fascinating Catalogue RS.

LORD & BURNHAM

ST. CATHARINES, ONT.

SPRAY the **EASY WAY**
with an
ARNOLD GARDEN HOSE
Adjustable **SPRAYER**

There's a *BUG KILLING ARNOLD CARTRIDGE* for every insect pest, as well as for many plant diseases. The *ARNOLD SPRAYER* special nozzle adjusts with a flick of your finger.

The unique angled nozzle extension makes the *ARNOLD SPRAYER* ideal for spraying those hard to get at underleaf insects. It's easy to use, efficient and economical.

For *FREE* literature and the name of your nearest dealer, phone or write to:—

BATEMAN GARDEN CENTRE SUPPLIES
333 Dundas Hwy. E., Cooksville, Ont.
Telephone Cooksville 277-8973

Besides some 250 old favorites and newer varieties, the following

NEW ROSES

will bloom in our nurseries in Summer 1962:

Bajazzo, Orange Delbard, Sibelius, Santa Teresa d'Avila, Ambossfunken, Goldrausch, Dacapo, Stella, Hansestadt Bremen, Gartenzauber, Elysium, Toni Lander, Dresden, High Time, Pink Marvel, Super Star, J. S. Armstrong, Lady Luck, King's Ransom, My Fair Lady, Golden Slippers, Memoriam, Rosemarie.

Visit our Rosefield from July 10 on, to see the rich assortment of our hardy roses.

Send for our complete list of Canadian grown roses, flowering and shade trees, ornamental shrubs and evergreens, dwarf and standard fruit trees.

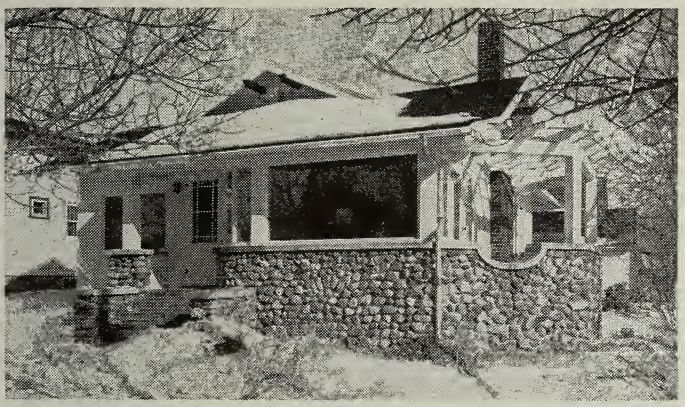
V. KRAUS NURSERIES
CARLISLE, ONT.

16 miles north of Hamilton

growers of the best since 1920

TWINDOW

helps maintain even temperatures all winter long



Twindow* helps keep the temperature in this house at a comfortable, even level. It can do the same in your home too! You see Twindow is made up of two pieces of glass separated by an imprisoned layer of dry, non-circulating air.

This makes it an excellent insulator against winter cold. With Twindow, draughts are a thing of the past, even close to the window. No more 'fogged over' windows either, for Twindow virtually eliminates condensation.

Twindow is surprisingly economical to install too. For complete details, contact your local Canadian Pittsburgh branch.

*T.M.Reg'd

Duplate
CANADA LIMITED

ALPINES

Dwarf slow growing
Conifers and Shrubs

Unusual Plants
from the world's
far corners

Catalogue free

ALPENGLOW
GARDENS
13328 Trans-Canada Hwy
New Westminster B.C.

KEITH'S SEEDS

Specialists in Fine Seeds Flowers and Vegetables
also
for fall we offer some of the Finest Holland Bulbs

visit our
GARDEN CENTRE
Yonge St. Thornhill

Send today for 1962 catalogue

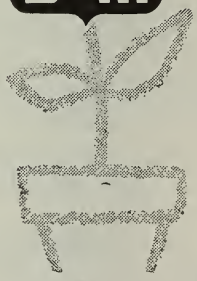
Geo. Keith & Sons Ltd.
124 King St. E., Toronto 1
Phone EM 6-5871

Sow the Seeds of Success at... "MY BANK"

TO 2 MILLION CANADIANS

B of M

There's no better way to cultivate success than with money in the Bank. And it takes only one dollar and three minutes to plant your "success fund" at Canada's First Bank. You'll be surprised — with the interest we add — how quickly your savings grow if nourished with regular deposits.

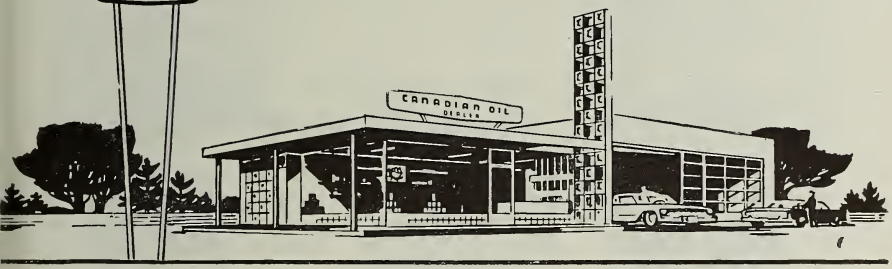


BANK OF MONTREAL
Canada's First Bank

All Canadian -- -- all the way
from oil fields to
refinery to you...

WHITE ROSE

CANADIAN OIL COMPANIES, LIMITED



ROSES

Ellesmere Nurseries Limited

Canada's Largest Rose Growers

Select your Roses from a large assortment of tested, hardy, first quality plants — the best of the old and New varieties — Fully guaranteed to grow for Spring or Fall planting.

Complete list on request.

ELLESMERE NURSERIES LTD.,
R.R. 1, Brooklin, Ont.

ANDERSON - SMYTHE LIMITED

GENERAL CONTRACTORS AND ENGINEERS

154 Merton Street — Toronto 7, Ontario

Schools, Churches
Offices, Factories and Institutions

ROSES are RED

yellow and pink — and they're all beautiful — PROTECT THEM.

For a full line of
Insecticides Fungicide and Garden Chemicals call

RICHARDSON'S EXTERMINATION LTD.

202 Laird Drive
LEASIDE, ONT.

GA. 1-6535

"THE FINEST IN WORLD FAMOUS ROSES"

HIGH PARK *Rose Specialists*

IN THE SPRING, DORMANT PLANTS
SHIPPED FROM OUR REFRIGERATED STORAGE
OR
VISIT OUR ROSE DISPLAY AT 226 DIXON ROAD
WHERE
YOU CAN SELECT PLANTS IN BLOOM
WELL ESTABLISHED IN A NEW CONTAINER THAT
WILL DISINTEGRATE WHEN SET IN YOUR GARDEN

Roses Love Compost

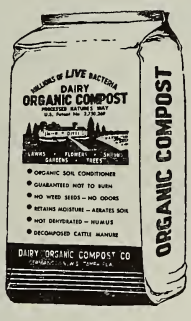
Grow Better Roses with Compost
'Nature's Own Way to Fertilize'

Distributors for These Rose Growing Aids!

ORGANIC COMPOST
FERTILIFE
GARDENURE
FERTIE CATTLE MANURE
FERTIE SHEEP MANURE

STADLER'S
Triple XXX
Rose Maker

the 3-in-1 rose food
7-8-5 organic base
plus F.T.E.



These Products are
DECOMPOSED Manure
(Not Dehydrated)
And can also be used
to start
Your Own Compost

Call or Write for FREE Price List

BE SURE TO VISIT OUR ROSE GARDEN THIS SUMMER

226 Dixon Road (just east from Islington Avenue), Weston, Ontario
Telephone: CHerry 9-5111

SO-GREEN
FERTILIZER 7-7-7

Research at University of Louisiana indicated Roses should have a balanced formula fertilizer of 1-1-1 or multiples thereof.

Dr. R. W. Oliver's article "Roses and Soil Fertility" recommends a fertilizer with balanced Ratio of 7-7-7.

Granular, odourless, dustless So-Green is available in 5, 20, 40, and 80 lb. bags at Garden Centres, Hardware and Department Stores.

QUALITY GIFTS
FOR
ALL OCCASIONS

★

BIRKS
JEWELLERS
134 YONGE ST. • 33 BLOOR ST. W.

☆

Don Mills Shopping Centre
Oshawa Shopping Centre

ROLCUT SECATEURS

The ideal pruners for Roses. Made in England, awarded Silver Medal, National Rose Society

RA-PID-GRO

Amazing new discovery. The original foliage-feeding fertilizer

Phone or Write for Catalogue

C. A. CRUICKSHANK LTD.

Accessories for Rose growers
BULBS PLANTS SEEDS
1015 Mount Pleasant Road
HUdson 8-8292 Toronto 12

Make your gardening easy

get a WILKINSON SWORD PRUNER

Unique FLOATING BEARING for effortless ease

The most efficient pruner ever produced. Perfectly balanced with light alloy handles specially designed to fit the hand. Note the unique double floating bearings. One holds the blades together and prevents twisting; the other gives the cut its smooth, sliding action. The blades are rust-resisting, of course, and a groove is provided in the holding blade to drain off sap and stop the blades sticking together. The neat flick catch operates a hidden spring to open the pruner.

W.40 KNIFECUT PRUNER

BY APPOINTMENT TO H.M. QUEEN ELIZABETH II SWORD CUTLERS

WILKINSON SWORD LIMITED · LONDON · ENGLAND

Canadian Agent: JOHN A. HUSTON LIMITED,
36 CALEDONIA ROAD, TORONTO, 10

Two-way beauty control for

YOUR ROSES!

1 . . . **WILSON'S GARDEN SPRAY** kills all insects attacking roses and mites too! Leaves no visible residue to cloud the beauty of foliage or flowers.

2 . . . **WILSON'S ALL PURPOSE FUNGICIDE** is the ideal product to protect your roses from disfiguring Black Spot and Powdery Mildew. Inexpensive to use.

Be Sure it's . . .

WILSON'S

PESTICIDES

MODERN ROSE NURSERY

Offers you the finest in Canadian grown Roses
Reasonable prices — Guaranteed quality
Inquiries solicited and should be addressed to

Bert Wiebicke
2485 Lawrence Avenue, East Scarboro, Ontario
Phone PL 9-6505

WALLS, RUGS AND UPHOLSTERY

Cleaned to new freshness and beauty

TORONTO'S FINEST For Over 50 Years

We clean and restore like new every type of interior decorated surface to stay clean as if freshly decorated.

For Information Call

A. TEOLIS LIMITED

4 COLLIER STREET 924-1467

THE ORTHO Reg. T.M. ROSE SPRAY KIT

COMPLETE PROTECTION. For complete protection of your roses from insects and disease, there is nothing better than the ORTHO Rose Spray Kit. The kit contains ISOTOX and ORTHO Rose & Garden Fungicide. ISOTOX Garden Spray is widely recognized as one of the best all-purpose insecticides available. It gives you control of aphids, thrips, beetles, red spider mites, caterpillars rose chafers, and many others. ORTHO Rose & Garden Fungicide is the first control known to suppress the three major rose diseases: Rust, Black Spot, and Powdery Mildew. This product contains PHALTAN the ORTHO-developed 'miracle' fungicide which makes such complete control possible. With these two products in the ORTHO Rose Spray Kit, you have everything necessary for complete protection against insects and disease.

And for healthier roses with bigger blooms and more blooms use ORTHO Liquid Rose Food. This specially prepared 8-12-4 formula plus a Chelating agent is designed specifically for roses. Feeds through roots and foliage making fertilizing as easy as watering.

ORTHO AGRICULTURAL CHEMICALS LTD.

OAKVILLE, ONTARIO **NEW WESTMINSTER, B.C.**

Reg. T.M.: ISOTOX, ORTHO

Our Aim

CANADIAN ROSES

FOR CANADIAN GARDENS

JOHN CONNON NURSERIES
LTD.

Box 200,

WATERDOWN—ONTARIO

Growers of Quality Roses
Evergreens, Trees, Shrubs
Hedging, Perennials

Catalogue mailed on request

ENDEAN
NURSERIES
GARDEN CENTRE

CANADIAN GROWN ROSES

All American Award
Winners from Jackson & Perkins

EVERGREENS & SHADE TREES

YONGE STREET NORTH
OF
RICHMOND HILL

Tel. 285-5122

Gold Seal

NEW STANDARD OF TIRE EXCELLENCE

COMPLETE ROSE PROTECTION AND FEEDING

with

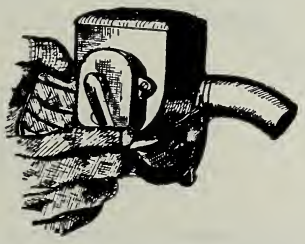
PROTEXALL SPRAY or PROTEXALL DUST
PLANT ROTARY DUSTER
PLANT PROD 20-20-20 INSTANT PLANT FOOD
SKOOT — REPELLENT FOR RABBITS MICE AND DEER
ACTO Q.R. CONCENTRATE HERBAL COMPOST MAKER

PROTEXALL SPRAY or PROTEXALL DUST

A powerful combination of insecticides and fungicides that will protect roses and other flowers and shrubs from most insects and diseases such as aphids, mites, rose chaffers and others, as well as black spot and mildew.

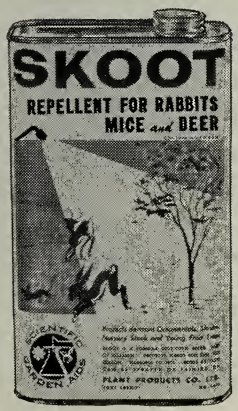
PLANT ROTARY DUSTER

This light weight aluminum rotary duster throws an eight foot stream of dust in an ever continuous flow. Dusts 200 bushes with one filling of PROTEXALL DUST.



PLANT PROD 20-20-20 INSTANT PLANT FOOD

Special rose fertilizer and all around plant food for flowers, vegetables, shrubs, trees, lawns, house plants and transplanting — and so easy to apply. This is a new type of instantly-soluble plant food that feeds through the leaves, as well as the roots. It goes to work instantly it touches the foliage and will not harm even the tender growth.



SKOOT — REPELLENT FOR RABBITS MICE AND DEER

Protects dormant ornamentals, shrubs, nursery stock and young fruit trees. SKOOT is a formula developed after years of research — protects plants for one full season — harmless to pets — repels by taste. Can be sprayed or painted on.

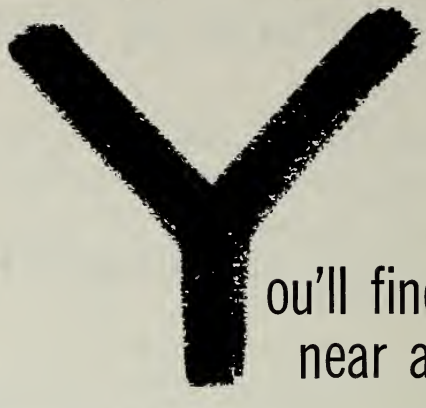
ACTO Q.R. CONCENTRATE COMPOST MAKER

The British herbal compost maker that helps produce the wonderful compost which roses thrive on.

Plant Products Company Limited

70 WESLEY AVE.,
PORT CREDIT, ONT.

A PLANT PRODUCT
For Better Gardening



ou'll find us
near at hand . . .

When you have banking to do, our nearest branch will gladly help you. Come in and meet our personnel.

CANADIAN IMPERIAL
BANK OF COMMERCE
THE BANK THAT BUILDS

OVER 1260 BRANCHES TO SERVE YOU

MP-631

Rowen Press Limited

"Printing That Pleases"

PRINTERS • STATIONERS • OFFSET
— RUBBER STAMPS —

HUDSON 9-1197

116 LAIRD DRIVE LEASIDE, ONT.

The Garden Club of Toronto

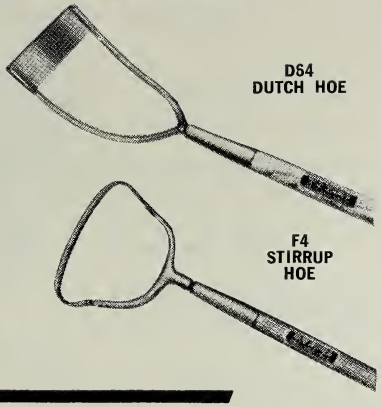
Current Project is

THE CIVIC GARDEN CENTRE
AT THE EDWARDS GARDENS

Exactly what you need in

ROSE HOES!

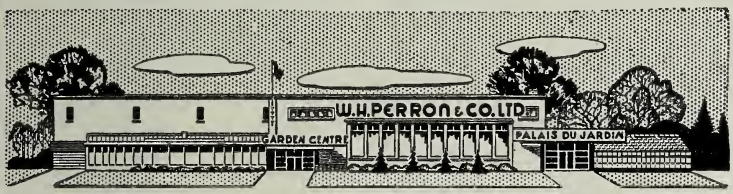
What a difference if it's a True Temper hoe! Just the right light surface cultivation touch for sure control to protect rose roots . . . Blades that stay keen longer thanks to tough-tempered steel . . . Splinter proof, fire-hardened handles! And get the same fine quality in Rose Pruners and other garden tools by



TRUE TEMPER

WELLAND VALE MANUFACTURING COMPANY LTD., ST. CATHARINES, ONT.

"CHEZ PERRON TOUT EST BON"



"WE LEAD IN PLANTS AND SEEDS"

Best roses for our Canadian climate. We give the A.R.S. rating, when known.

RA-PID-GRO

Distributors for the well-known 100% soluble, instant fertilizer **Ra-Pid-Gro.**

Analysis 23-21-17, plus all minor elements and vitamins B_1 and B_2. **2 lb. $2.50, ppd.,**

and **Tri-Con applicator** for applying Ra-Pid-Gro. Water passing through dissolves it at the right ratio. **$6.50 ppd.**

515 Labelle Blvd., Chomedey (Montreal 40) P.Q.

1962-63 Garden Guide (Catalogue), 96 pages, 50c.

KEY-Advertising Service Limited

PRINTING — ADDRESSING — MAILING

ERNIE LOWCOCK
Phone BA 1-3433-4

74 SHEPPARD AVE. W.
Willowdale, Ont.

ACCLIMATIZED
Canadian Grown Roses

R. canina and R. multiflora understock
150 Rose varieties
Competitive prices

For price and variety list write to
CARL PALLEK & SON NURSERIES
Box 137, Virgil Ont. (Near St. Catharines)

SHUR-GAIN
SPECIAL PLANT FOODS

Strive for and Gain . . .

- **Prize-winning Blooms**
- **Extensive Root Development**
- **Vigorous Branching and Budding**

— NEW THIS YEAR —

SHUR-GAIN FEED
N'WEEDAWAY

SHUR-GAIN FEED
N'BUGAWAY

GARDEN SPECIAL
For Flowers, Shrubs, and Gardens.
50 lb. feeds up to 1650 sq. ft.

Available at Better Hardware Stores and Garden Supply Centres

CANADA PACKERS
SHUR-GAIN DIVISION

TURF SPECIAL
for lawns
40 lbs. feeds 4000 sq. ft.

Upjohn

to control Powdery Mildew, use Acti-dione PM*

Weekly spray applications of Acti-dione PM throughout spring and summer help protect your prized roses from this killing disease. This antibiotic-fungicide will bring mildew under control even when the disease is well advanced.

Easy to apply with hand or power sprayer, Acti-dione PM leaves no unsightly residue to mar your roses' beauty.

For further information on lawn and garden care, write to: **Agriculture Sales**
The Upjohn Company
Kalamazoo, Michigan

*TRADEMARK, REG. U.S. PAT. OFF.
COPYRIGHT, 1962, THE UPJOHN COMPANY

Plant Canadian Grown Roses

High quality, strong bushes.

Hardy, *true-to-name varieties.*

Old favourites and newer introductions.

We cordially invite your visit when they're in bloom in the field — from mid-June till frost.

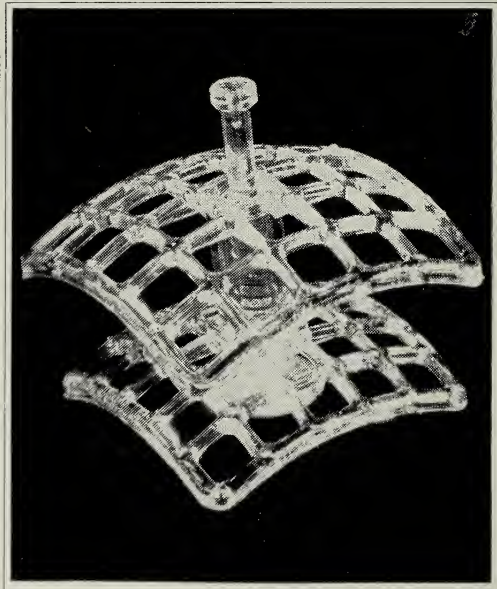
PICKERING NURSERIES REG'D

Highway #2

Pickering, Ont.

(between Dunbarton and Rosebank — 20 miles east from downtown Toronto, 2 miles from eastern Metro boundary)

MEMBER CANADIAN ASSOCIATION OF NURSERYMEN



620 FLOWER FASHIONER

NOW you can make those truly lovely and enviable flower arrangements. The Gadjo Flower Fashioner, 3" sq. of strong crystal-clear plastic, attaches to your container, bottom or side; a patented suction cup and spring hold it securely and make your flower arrangements tip-proof. Even tall and heavy flower arrangements are secure and will not tip over. Perfect for those beautiful (and fashionable) floral displays in shallow containers, the stems go to the very bottom and get all the water. The crystal clear Fashioners blend with the arrangements and are almost invisible in water. They are a pleasure to use. **ONLY $1.25 plus 25c for shipping. We pay shipping on orders of 3 or more. Send check or Money Order. No C.O.D.'s please.**

R. E. Bridgman Ltd.
278 Eglinton Ave. W.
Toronto 12, Ont.

APHIDS *can be controlled easily with* **MALATHION**

This year when Aphids (lice) and other insects plague your roses and garden, be sure to use **MALATHION,** the modern insecticide for your whole garden.

MALATHION on the label is your guarantee of a good insecticide.

CYANAMID

CYANAMID OF CANADA LIMITED

try the new

PARKER T-Ball **jotter** D.M.6.

$1.98

ROSA CANINA

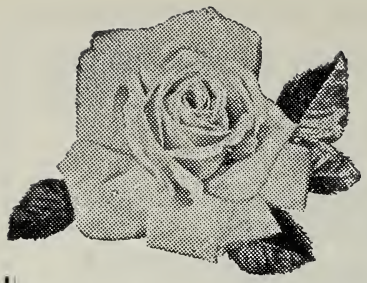
We are extremely proud of the roses we produce on *Canina* understocks! And justly so; For research on Canina stocks continues to prove they have a resistance to adverse soil and climate conditions.

We know you too will be proud to show your friends the wonderland achievements with "ROSECROFT" *Canina* understock roses.

A few of the latest introductions: Elsa Arnot, Tropacano, Dr. A. J. Verhage, Fritz Thiedeman, Christian Dior, and Piccadily.

Rosecroft Nurseries Ltd.

Box 14, R.R. #7, Langley, B.C.



ROSES

of proven quality
and grown on selected
hardy understocks

THE BEST OF THE NEW ROSES, AS WELL AS THE OLD FAVORITES

- FALL BULBS
- LILIES
- PERENNIALS

FREE — Beautifully illustrated catalogue

EDDIE'S NURSERIES

4100 S. W. Marine Drive **Vancouver 13, B.C.**

NEW EXCITEMENT
in Rose Growing
with the

ROSS
Root Feeder

and the Rose plus
Iron Cartridge

To Stimulate your Roses
and Produce More Buds
and Flowers

The Rose Plus Iron Cartridge contains chelated iron (Sequestrene, Chel. 330) in the form that clings to the soil in soluble form until taken up by the plant. This will create new dark green foliage growth, better blooms, greater color contrast and a prettier rose garden. Frequent and proper use of the Rose Plus Iron Cartridge gets water and plant food right to the root of your roses; in many cases prevents chlorosis.

Distributors

BATEMAN GARDEN CENTRE SUPPLIES

333 Dundas Highway E., Cooksville, Ont.
Telephone Cooksville 277-8973

BROOKDALE - KINGSWAY
Nurseries

"FOR QUALITY AND SERVICE"

PERENNIALS **EVERGREENS**
HEDGING **TREES**
VINES **SHRUBS**
ROSES

Send for the completely new 1962 Garden Guide — Full color pictures and helpful Gardening Section.

PHONE OR WRITE

BROOKDALE-KINGSWAY NURSERIES
BOWMANVILLE, ONTARIO

BOWMANVILLE MA 3-3345 TORONTO EM 6-2566

DIXON-REID PLANT FOOD

Makes the amateur gardener an expert!

- Used indoors and outdoors by gardeners — for soil treatment, transplanting, nurseries, cut flowers, lawns, trees and shrubs.

Available in **25c, 50c, $1** and **$1.79** bottles.

IMPROVED FERTILIZER FOR TRANSPLANTING

DIXON-REID CO. LTD., TORONTO

OVER A MILLION SOLD

At Florists, Department, Hardware, Grocery, Drug and 5 and 10c Stores throughout Canada.

HARKNESS ROSES offer

- QUALITY — N.R.S. Championship Trophy Winners each year since 1957
- HARDINESS — Roses grow in an exposed hillside, developing firm hard stems
- VARIETY — over 400 varieties to choose from, including the pick of the New Roses and many old timers

And we might add that we offer *Candour,* for in the Harkness Catalogue each variety is considered soberly on its merits, and judged accordingly. We shall be pleased to send a copy, and information about importing Roses into Canada, on request to

R. HARKNESS & CO. LTD.
The Rose Gardens, HITCHIN, HERTS., England

SWIFT CANADIAN CO. LIMITED
AGRICULTURAL CHEMICAL DIVISION
TORONTO 18, ONTARIO

FREE! CANADA'S MOST WANTED GARDEN CATALOGUE

McCONNELL NURSERY'S

80 PAGE, COMPLETELY COLORED

GARDEN CATALOGUE

Our 51st anniversary edition—

Containing the newest and best in top quality plants for the home and garden.

Write for your FREE copy today!

FEATURING FOR 1962

2 EXCLUSIVE McCONNELL ROSE INTRODUCTIONS

HALLOWEEN

A gay, orange and yellow Hybrid Tea — new for 1962!

CANADIANA

Golden-yellow Hybrid Tea — newly introduced last year.

ALSO THE FOLLOWING NEWER VARIETIES

Christian Dior, Golden Slippers, John S. Armstrong, and King's Ransom (1962 A.A.R.S. Winners) — War Dance (New Red Grandiflora).

We also have a fine selection of the old favorites

Hardy Plants for Canadian Homes

THE McCONNELL NURSERY CO. LTD.

PHONE 874-4405

85 NOVA SCOTIA ST., PORT BURWELL, ONTARIO.

HAWLMARK ROSES

OF WORLD WIDE REPUTATION

We would gladly send our illustrated catalogue which contains the best of the new and old varieties, free on request.

Repeat orders from satisfied Canadian customers indicate our trees do well.

ALEX. DICKSON & SONS, LTD.

HAWLMARK

NEWTOWNARDS NORTHERN IRELAND

M. A. Cadsby

BARRISTER AND SOLICITOR

Suite 306
133 Richmond St. W.
Toronto 1, Ont.

Telephone
EMpire 6-9501

Our crop of Roses for this season photographed in July 1961.

EVERGREENS

TREES SHRUBS VINES

ROSES

ALPINES PERENNIALS

Illustrated Catalogue mailed free on request.

SHERIDAN NURSERIES Limited

HEAD OFFICE: Box 181, Islington, Ontario.

SALES STATIONS: 2827 Yonge St., Toronto 12, Ont.
Lakeshore Highway No. 2 at Clarkson, Ont.
Queen Elizabeth Way West of No. 27 Cloverleaf.
650 Montee de Liesse, St. Laurent, Montreal, P.Q.

Printers to the Nursery Trade . . .

Specializing in Catalogue Design and Production

A complete library of black and white, as well as
full color illustrations, available for use.

THORN PRESS

Thorn House

135 Railside Road • DON MILLS, ONTARIO • Tel. 447-8541